Geo

# ROCKS and MINERALS

OF MICHIGAN
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JULY - AUGUST, 1952

A Magazine for Mineralogists, Geologists and Collectors

Official Journal of the Rocks and Minerals Association

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July — August
1952

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## BIG MID-WEST FEDERATION CONVENTION HELD IN ST. PAUL, MINN.

On July 1, 2, and 3, 1952, the Mid-West Federation of Mineralogical Societies held their 12th Annual Convention at Macalaster College in St. Paul, Minn. It was a huge success as it attracted dealers and collectors from all over the country. Approximately 3,000 people visited the displays which were held in the large and spacious gymnasium. Hazen T. Perry, of Minneapolis, Minn., President of the Federation, was the officer in charge and under his guidance everything went off smoothly.

The Editor of ROCKS AND MINERALS was in attendance but unfortunately he arrived a little too late — on the last day and for only about 3 hours — and so had no opportunity to tour the displays as he had done a few days earlier at the Canon City, Colo., convention (see elsewhere in this issue for the report). What he saw not only impressed him most favorably but the friendly atmosphere and good will which permeated the convention will long be remembered. It was a very good show and all those who had any part in its activities are to be congratulated.

Many of the exhibits were outstanding for their excellent quality and attractiveness — beautiful mineral specimens, very nicely displayed, and well labeled. How the Editor would have enjoyed examining them at leisure and in making notes! There were choice crystals and groups of crystals for the mineralogist, beautiful cut stones, cabochons, slabs, and jewelry for the lapidary; some outstanding fossils for the paleontologist, etc., etc. But how could one see all these mineralogical treasures in 3 hours when at the same time he had to meet new friends and greet old ones?

It may matter little whether the convention gets a big write-up or only a little one but what does matter is that the Mid-West Federation Convention held in St. Paul, Minn. (Minnesota Mineral Club and Geo'ogy Society of Minnesota were the host societies) will go down in history as one of the nicest ever held in America!

## GEORGIA GEOLOGICAL SURVEY FIRST TO COOPERATE WITH MINERAL COLLECTORS!

Editor R & M:

In your March-April issue of ROCKS AND MINERALS you ran an article "Pennsylvania Geological Survey cooperates with State Mineral Society". In this article it was stated that The Mineralogical Society of Pennsylvania was believed to be the first and only mineralogical society to enjoy the endorsement of its home State.

Of course Georgia is glad to hear of this fine cooperation but we want your readers to know that the Georgia Mineral Society has had the fullest cooperation and endorsement of the State Geological Survey since the founding of the Society in 1935. Actually the Society was founded by three staff members of the Survey along with one other person. Four staff members have served as President, two as Secretary, one as Curator and one as Editor of the Newsletter. The Georgia Survey sponsors the very wonderful "Newsletter" of the Society and provides for its publication and mailing. The field trips of the Society are arranged in close cooperation with the Survey. The Survey has provided minerals for the museum of the Society and has stored specimens, books, and equipment of the Society.

There is no more closer cooperation between Society and Survey possible than exists in Georgia.

The Georgia Mineral Society is one of the older mineralogical societies existent and is stable, large, effective, enjoyable — mainly because of the unceasing support of the Georgia Geological Survey.

Please publish these facts.

Lane Mitchell, Director
School of Ceramic Engineering
Georgia Inst. of Technology
Atlanta, Georgia.

June 12, 1952.

**ROCKS and MINERALS**

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# A BRIEF GUIDE TO THE GEOLOGY OF THE OLYMPIC NATIONAL PARK, WASHINGTON

**WILBERT R. DANNER**

Department of Geology, College of Wooster
Wooster, Ohio

Three things combine to make the Olympic National Park one of our nation's most scenic and interesting National Parks. Its magnificent snow-capped mountains, its jungle-like vegetation and its unique wildlife. The visitor to the park is interested in these features and desires to know more about them. It is hoped that this brief account of the geologic features of the park will answer some of the questions about its mountains.

**Location of Olympic National Park**

### The Scene

The Olympic Mountains make up the major portion of the Olympic Peninsula which forms the northwestern portion of the State of Washington. The peninsula is bounded on the west by the waters of the Pacific Ocean, on the north by the Strait of Juan de Fuca, on the east by the portion of Puget Sound known as Hood Canal and on the south by the lowlands of the Chehalis River valley. A coastal plain, quite narrow in the north, extends along the western, northern, and northeastern coasts. The peaks rise rather abruptly from this coastal plain to altitudes of over 7,000 feet. The highest peak, Mount Olympus, 7,923 feet in elevation, covered with a dazzling mantle of six large glaciers, occupies a majestic position near the center of the mountains.

Sparkling rivers radiate out in all directions from the mountainous interior of the peninsula. They descend steeply from their sources of glaciers and snow fields into low narrow valleys which penetrate

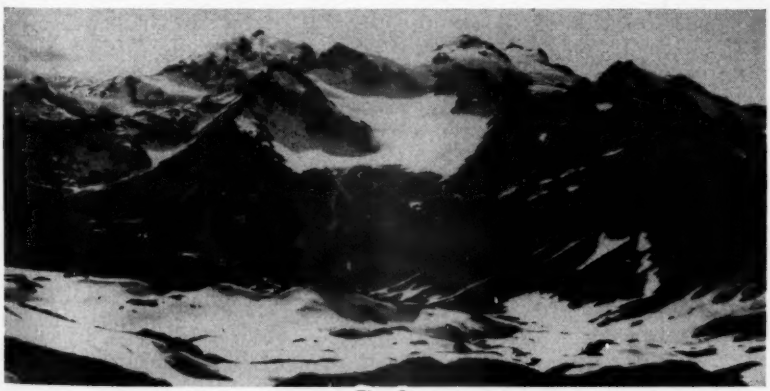


**Fig. 1**
**Mount Olympus. View looking west from Dodwell Rixon Pass.**

deeply into the interior.

The large glacial mountain lakes of the Cascade Mountains to the east are not found in the Olympics. Instead of gouging out large basins the glaciers of the Olympics left only small depressions. High up in the alpine basins are found tiny blue lakes. A few are found in strange positions on the valley sides. However, the peninsula is not without large lakes. Four are found. One of these, Lake Crescent, on the north side of the Peninsula, is surrounded by enough high ridges to be called a mountain lake. Certainly it posseses the clear waters, the blueness and other qualities that belong to a Mountain lake.

Out in the northwest is the largest lake. Lying just a short distance from the ocean is low Lake Ozette, with a brushy shoreline and possessing a character all it owns. In the southwest is Lake Quainault, with one end in the mountains and the other in the lowlands. Due east lies its sister, Lake Cushman, now serving as a power reservoir.

The peninsula needs a lake in the northeast to balance the picture but nature instead provided two beautiful almost land-locked bays extending south from the Strait of Juan de Fuca, Sequim Bay and Port Discovery Bay.

### The Mountains

The Olympics present no towering volcanic cones nor high granite peaks, but rather a confusing series of steep-sided, jagged ridges. The "peaks and mountains" are the highest points on these ridges and are seldom much higher then other points on the same ridge.

Close scrutiny of the topography of the Olympics reveals two pronounced trends. The first is a northwest-southeast trend. It begins at the ocean in the vicinity of Cape Flattery and extends across the north side of the peninsula to Hood Canal. The trend is repeated across the Canal in the Blue Hills of the Kitsap Peninsula. It follows an ancient line of uplift which produced a prehistoric Olympic Mountains.

A second topographic trend is formed by a horse-shoe shaped ridge pattern beginning at Cape Flattery in the northwest and extending along the northern, eastern and southern borders of the peninsula. The outermost ridge of this trend is usually formed by the outcrop of a series of relatively resistant lava flows. Many of the highest points in the moun-

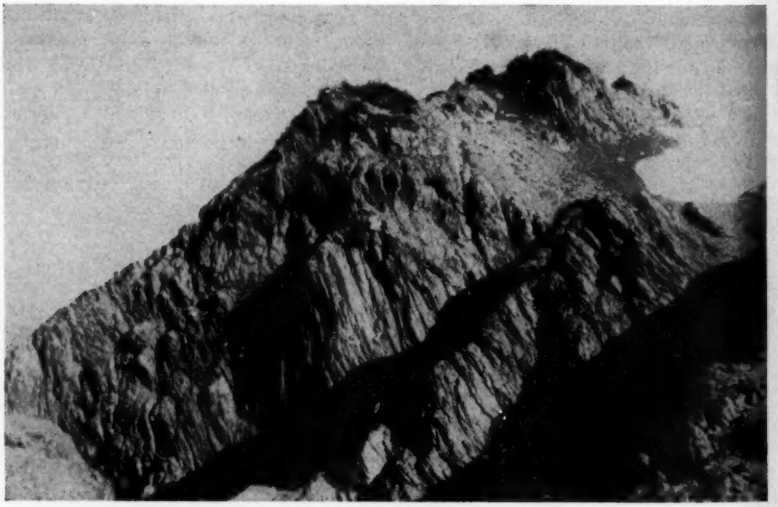


**Fig. 2**
**Slates of the Soleduc formation exposed on the south side of Bear Pass.**

tains are to be found along this outermost ridge, particulary along the eastern side of the park. The rivers draining the central portion of the mountains cut steep-sided canyons through it.

### Geologic History

Imagine, if you can, all of western Washington covered by the sea as far east as the Cascade Mountains. This was the scene about 120 million years ago. All the present Olympic Peninsula was covered by this sea. To the east lay no Cascade Range or Columbia Plateau but a lowland of little relief extending back to perhaps as far as Idaho. To the west was also land. It was off the present coast and could have been either a large peninsula or a group of islands.

This sea extended northward as far as southern Alaska and south perhaps as far as California. It occupied a trough-like depression in the earth's crust called by geologists a geosyncline. Into this depression came sediments from the west and from the east. Thousands of feet of shale, sandstone and a dark sandstone called a graywacke were deposited on the sea bottom. At times fissures opened on the sea floor and lava poured out to become buried by later deposits of sediments. Conglomerates and breccia were deposited near shore. Limestone and chert were formed when conditions favorable for their precipitation developed in the sea.

The rocks formed in this sea make up the greater part of the Olympic Mountains. If one were to take a map of the Olympics and draw a line beginning in the north at the town of Sappho and go east to Lake Crescent, then to Lake Mills on the Elwha River, east to Deer Park, then southeast to the west side of Mount Constance, south to the north end of Lake Cushman and west to Lake Quinault, all the rocks inside of this horse-shoe shaped line would be of this age.

These sediments and volcanic rocks are called the Soleduc formation. They are the oldest rocks known in the Olympics. Since they were laid down the shales have been turned into slates and the sandstones greatly indurated.

The interbedded lava flows commonly show a pillow-like structure formed by their quick cooling under water. In some areas the pillow-like bodies are small and resemble layers of cannon balls. At other

**Fig. 3**

**Pillow structure. Basalt flow in the Soleduc formation exposed in the upper Royal Basin.**

localities they are larger and more irregular in shape. In some of the pillow-lava layers are small lenticular bodies of varicolored limestone.

**Fossil Worms Found Near Mt. Constance**

Conditions were not favorable for life in this sea. Its bottom was foul and the water was deficient in oxygen. Only a few worms were able to live in this environment. These worms protected themselves by cementing tiny sand grains around their body to form a long tube. These tubes resemble the spines of some of our modern sea urchins. They are found in similar rocks in Alaska and in the Cascade foothills of western Washington. Their association with fossils of known Lower Cretaceous age in Alaska enables us to determine the age of the Soleduc formation as other fossils are almost completely absent. These worm fossils have been collected west and north of Mount Constance and at a few other localities in the mountains.

The small limestone bodies associated with the submarine lava flows contain the remains of microscopic one-celled organisms called foraminifera. These lived at the surface of the sea, floating there in countless numbers. When they died their shells sank to the bottom and were buried in the mud.

**Cenozoic Era and the Birth of The Olympics**

The Cenozoic Era began approximately 70 million years ago. For the second time the sea covered the Olympic Peninsula area. Back in Upper Cretaceous time the region was uplifted above sea level. The sediments and volcanics of the Soleduc formation were folded and subjected to erosion. Erosion progressed until the land was worn down close to sea level. Then a slow subsidence took place and with the opening of the Cenozoic Era the sea was again as far east as the Cascade mountains.

The history of this era begins with a record of intense volcanic activity. Fissures opened on the sea floor and immense quantities of basalt poured out over sea floor. The basalt congealed into pillows and piled up in great masses hundreds of feet thick. At times the eruptions were violent and volcanic ash accumulated with the flows. The greatest accumulation took place in the eastern and southern parts of the present Olympic Peninsula. In other areas, particularly to the northeast, lava outpourings alternated with sediment deposition. Sandstone, shale and conglomerate were deposited in thin layers between flows of lava.

This thick sequence of basalt flows and interbedded sediments is called the Metchosin formation. Its name was derived from the Metchosin District on Vancouver Island on the north side of the Strait of Juan de Fuca where similar basalt flows occur.

The Metchosin formation was deposited during the lower part of the Eocene Epoch of the Cenozoic Era.

As time progressed, fewer volcanics were deposited along the northern part of the Peninsula. Shales and sandstones became more abundant. Volcanism continued in the east and south with deposition of smaller amounts of sediments. Toward the middle of the Eocene the sea became shallower, either from a slow uplift of the sea bottom, or because it was becoming filled with deposits. The upper portions of the Metchosin on the eastern side of the Olympic Peninsula show less and less pillow structure and become more massive, developing even some columnar structure at the top of the formation. Some of the interbedded sediments bear fragmental remains of plants indicating that they were formed near shore.

The Metchosin rocks form the border of the Olympics. Their outcrops extend from Lake Quinault eastward to Hood Canal, then north to the town of Quilcene from where they veer northwest to Deer Park, Lake Mills and Lake Crescent. They cross Lake Crescent and form the high hills along the north side of the Soleduc Valley west of Lake Crescent. From about the town of Sappho they trend northwesterly reaching the Pacific Ocean south of Cape Flattery.

The accumulation of the Metchosin along the present northern border of the Olympic Mountains was followed by the deposition of shales and sandstones with a few thin basalt flows. These are called the Crescent formation and may represent

the end of the volcanic activity in that area. Outcrops of the Crescent are found along the northern border of the Olympic National Park and in the Olympic National Forest. One small outcrop is found along the beach west of Port Angeles.

Small lens of impure limestone found between the pillow layers of the Metchosin formation contain abundant remains of *Globergerina* a tiny floating foraminifera. A few sharks teeth have also been found. The shales and sandstones of the overlying Crescent contain remains of snails and clams as well as a few types of foraminifera.

Basalts and sediments of later Eocene age are found in the northeastern section of the peninsula outside of the park

At the close of the Eocene Epoch the Olympic area was again above sea level. Erosion attacked the recently deposited formations.

### Oligocene and Miocene Epochs

The Oligocene again saw western Washington subsiding beneath the sea. Pebbles, cobbles and sands composed of the underlying Eocene rocks were laid down as the first formation on this new sea bottom. The land continued to subside and several thousand feet of marine sediments were deposited. Deposition continued on into the Lower Miocene. An unconformable relationship between Oligocene and Miocene rocks on the north side of the peninsula indicates a time of uplift and erosion between the two periods.

Many well preserved fossils are found in these rocks. These fossils are related to many living forms in the tropics and indicate a much warmer climate for western Washington in the Oligocene and Miocene then at the present time. Most exposures of the Oliocene and Miocene rocks are found outside of the park.

The Miocene was a time of great volcanic activity in eastern Washington. A tremendous series of lava flows poured out over that area. This volcanism is represented in the Miocene of the Olympics by only a few thin basalt flows exposed along the ocean beaches and in the vicinity of Grays Harbor.

Late in Miocene time the land began to rise.

### Ancestoral Olympics Formed

The Miocene uplift formed an ancestoral Olympics. All of the older rocks were uplifted and folded along a northwest-southeast trend. The ranges extended from the present Pacific ocean northwest of Cape Flattery, southeastward across western Washington to the Columbia Plateau.

The present Olympic Mountains, the Blue Hills of Kitsap Peninsula and the Newcastle Hills southeast of Seattle are remnants of this range. Erosion has removed thousands of feet of overlying Oligocene and Eocene sediments until today the rocks exposed in the center of the Olympics are of the Lower Cretaceous period while in the Blue Hills and Newcastle Hills, Lower Eocene rocks are uncovered.

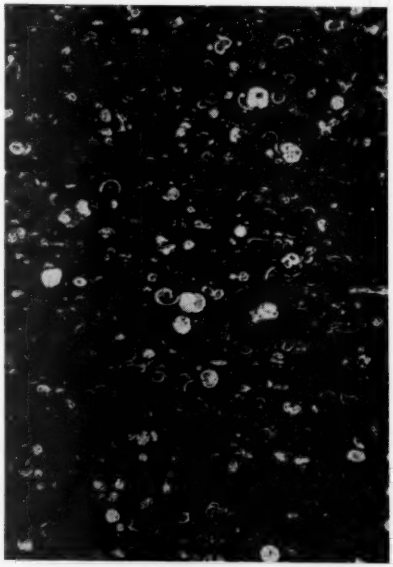


**Fig. 4**

**GLOBERGERINA in maroon limestone interbedded with the Metchosin volcanics on the south side of Mount Constance. Photograph of thin section of the limestone magnified 20 times.**

The Oligocene and Miocene sediments are found now only on the northern, southern and western borders of the peninsula. It is possible that small amounts of these sediments may be found in the mountains in downfolds protected from erosion.

The area to the north of the Olympics was depressed during this time and remains depressed today as the Strait of Juan de Fuca. Further north another mountain range paralleled the ancestoral Olympics. It remains today as Vancouver Island and the San Juan Islands. The region to the south was also depressed and today is the Chehalis River valley. The northwest-southeast structural trend developed by these earth movements shows up very strongly in present day topography in Western Washington.

This first Olympic Range was formed about 20 million years ago. A mighty range it must have been, probably as high or even higher then the present day Olympics.

**Formation of Present Day Topography**

As soon as they were uplifted, the Olympics were subjected to erosion. This continued during the Pliocene Epoch. Sediments worn from the mountains were carried down by streams and deposited in local basins to the southwest and in the Grays Harbor region.

The Upper Pliocene and Lower Pleistocene witnessed profound changes in the topography of western Washington. The Cascade Mountains were uplifted in the East cutting across the eastern end of the ancestoral Olympics. The Puget Sound region was depressed leaving the middle section as hills protruding up out of the lowlands The western portion was uplifted and forms the present day Olympics.

This is the scene today except for some modification by glaciation.

**The Pleistocene Ice Age**

After the re-elevation of the western part of the old Olympics, the climate of the world became somewhat colder then normal. The direct result of this was the formation of a great ice sheet in North America which advanced southward from Canada into the United States at least four times. Between the periods of ice advance the climate became warmer. During the pleistocene the Olympics became the site of numerous glaciers. With each advance of the continental ice sheet

**Fig. 5**

**Complex folding of the Soleduc formation exposed on the south side of Mount Anderson. Structure indicated by ink lines. Anderson glacier in foreground.**

the glaciers of the Olympics must have grown and advanced down their valleys. Only the evidence of this last down-valley advance has been found.

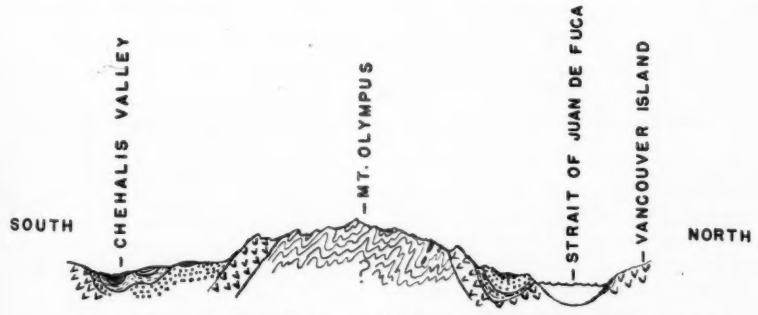
The valleys have been deeply gouged and rounded by the glaciers. They show the characteristic "U" shape of glacial carved valleys rather than the "V" shape of stream cut valley.

With the return of warmer weather after the last period of glacial advance, the glaciers melted back up their valleys and today are found only at the higher elevations in the valley heads and on protected mountain sides. Many have melted away completely. Today all are melting faster then they can be replenished.

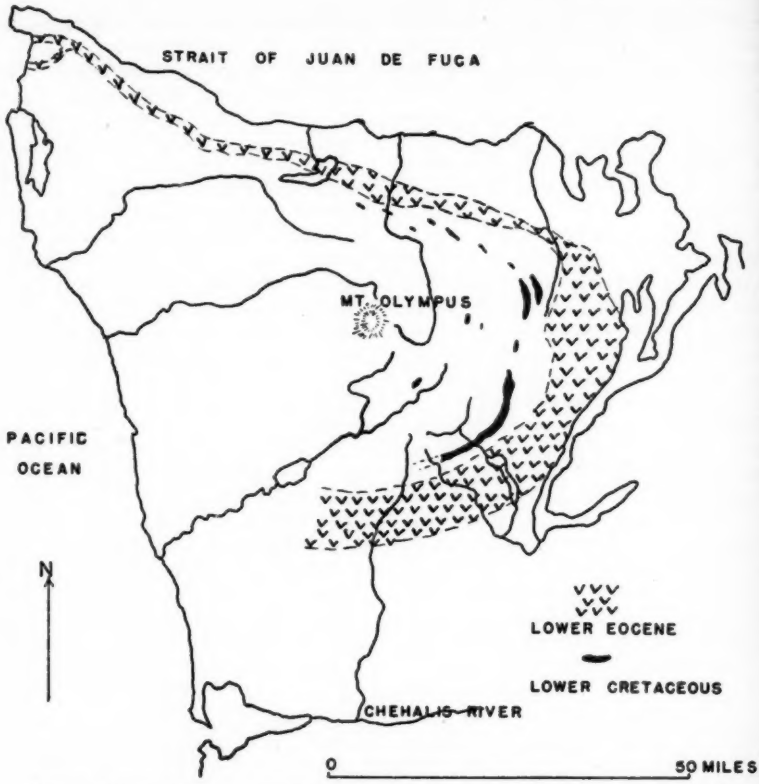
The advance of the ice sheet south from Canada brought a smaller mass of ice down from British Columbia into western Washington. This ice mass divided, part of it turning west and filling the Strait of Juan de Fuca and part of it moving south down Puget Sound to the vicinity of the present-day city of Olympia. This ice lapped against the northern and eastern borders of the Olympics and in the northwest managed to cross the hills southeast of Cape Flattery.

With the advent of warmer weather it retreated northward leaving behind on the slopes and in the valley of the Olympics granite boulders. There are no granite outcrops on the peninsula. The granite found has all been brought by the glacier from areas to the north. The location of the granite boulders indicates how far the ice was able to push up into the Olympic valleys. They have been found up the Elwha Valley as far as Camp Wilder 26 miles south of Port Angeles and deep in the interior. Other granite boulders have been found as high as 3,000 feet above sea level in some of the more northerly valleys.

As the mass of ice moved west along the northern border of the Olympics it scraped, gouged and enlarged an ancient valley. When it melted back with the coming of warmer times, the overdeepened valley was left filled with water, the present day Lake Crescent. The wide flat valley to the west of the lake was made by the meltwaters of the ice as it retreated




GEOLOGIC CROSS SECTION OF THE OLYMPIC PENINSULA




**Lower Eocene and lower Cretaceous volcanic rocks on the Olympic Peninsula.**

eastward.

Many small lakes and ponds were left in depressions as the glacier melted back. As the weather got warmer vegetation grew in and around these depressions. Bogs and swamps were formed. Mastodons and mammoths roamed the country and sometimes became mired in these mucky areas. In 1950 just a few miles east of the park headquarters at Port Angeles, the skeleton of a young mastodon was found by a farmer excavating a reservoir. Teeth and tusks have been found in glacial deposits in other parts of the peninsula.

The forces that mold the earth were not quiet during the glacial epoch. Deposits of early Pleistocene sediments were tilted by late earth movements along the northern and western coasts of the Peninsula. Movement is still going on as testified by the occasional earthquakes felt in western Washington. Some of these have originated in the Olympic Peninsula.

### Geologic Features Of The Park

Various features of the park evoke questions. Two of the most common are perhaps: What is this mountain made of? How old are these rocks? The general geology has been outlined. Now we might look briefly at a few of the mountains and other points of interest.

The highest and most well known mountain on the Peninsula is Mount Olympus. Located almost in the geographical center of the Peninsula it is

*(Errata Note: Page 347 is transposed with page 437.)*

*(Errata Note: Page 437 is transposed with page 347.)*


# A SELECTION OF BOOKS

KUNZ, G. F. **Gems and Precious Stones of North America.** 8 colored plates and numerous illustrations. New York, 1890. 336 pp. ..... $30.00
Ditto. 2nd edition with appendix. 367 pp. New York, 1892. Rare. .. 35.00
**The Curious Lore of Precious Stones.** 6 colored plates. 406 pp. Philadelphia, 1913. (Original edition, not a reprint) ..... 15.00

GOETTE, John. **Jade Lore.** New York, no date. Printed in China. 1 colored plate and numerous illustrations. 321 pp. ..... 20.00

BAUER, Dr. Max. **Edelsteinkunde.** (In German). 2nd edition, Leipzig, 1909 20 superb colored plates. 766 pp. Very fine copy. ..... 75.00

SPENCER, L. J. **The World's Minerals.** New York, 1911. Forty colored plates. 272 pp. Original cloth. ..... 7.50

SOWERBY, Henry. **Popular Mineralogy.** London, 1850. 20 colored plates. 344 pp. Small quarto. Very rare. ..... 10.00

GREG, R. P. & LETTSON, W. G. **Manual of the Mineralogy of Great Britain and Ireland.** London, 1858. 483 pp. Original cloth. The only topographical mineralogy of the United Kingdom. Scarce. ..... 10.00

FOOTE, W. M. **Complete Mineral Catalog.** Philadelphia, 1909. 320 pp. .. 2.50

WADA, Y. & KURITSU, H. **Mineralogy.** Tokyo, 1937. 56 colored plates of Japanese minerals, names of which are given in English, but descriptive text is in Japanese. 92 pp. ..... 7.50

RUDLER, F. W. **Handbook to a Collection of Minerals of the British Islands . . . in the Museum of Practical Geology, London.** Paper bound. London, 1905. 241 pp. ..... 2.50

CHAPMAN, E. J. **A Popular and Practical Exposition of the Minerals and Geology of Canada.** Toronto, 1864. 236 pp. ..... 7.50

DANA, James D. **System of Mineralogy.** "Ninth" edition (actually the 5th edition with 3 appendices). New York, 1889. ..... 6.00

SMITH, G. F. Herbert. **Gem Stones.** 4th edition. London, 1923. 314 pp. .. 3.00

KRAUS, E. H. & HOLDEN, E. F. **Gem and Gem Materials.** 1st edition. New York, 1925. 222 pp. ..... 3.00

EMANUEL, H. **Diamonds & Precious Stones.** London, 1867. 2nd edition. Numerous plates. Binding loose. ..... 6.00

WEINSTEIN, Michael. **Precious and Semi-Precious Stones.** London, 1939 3rd edition. 1 colored plate. 184 pp. ..... 2.50

WILLIAMS, A. F. **The Genesis of the Diamond.** 2 vols. quarto. London, 1932. Numerous colored and black and white plates. 636 pp. In mint condition. ..... 35.00

CHAMBERLAIN, Arthur. (Editor). **THE MINERAL COLLECTOR.** From Vol. 1, March, 1894 to Vol. 15 ending February, 1909, bound in 8 volumes. A **complete set** of this early popular magazine is **extremely scarce.** Write for further particulars.

**AND MANY OTHERS.** Postage extra. Inquiries are invited for rare or out of print books relating to mineralogy and gemology. I also purchase similar books.

## HUGH A. FORD

**110 WALL STREET** **NEW YORK 5, N. Y.**

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of basalt, much of it showing remarkable pillow structure. It is the highest peak seen on the Olympic Skyline looking west from Seattle. Excellent exposures of the pillows may be seen at the end of the road up the Dosewallips River. Other peaks to the north composed of similar rocks are Buckhorn and Iron Mountains, Mount Townsend, Mt. Maynard and Tyler Peak. To the south, Mt. Jupiter, The Brothers, Mt. Bretherton, Mt. Pershing, Mt. Washington and Mt. Ellinor are formed of Metchosin volcanics.

The younger sedimentary rocks generally do not form notable mountains. Mount Zion in the northeastern portion of the National Forest is formed on conglomerates of Oligocene age. None of these rocks form prominent features in the park.

### Mineral Springs

Two interesting hot springs are found in the northern part of the park, the Olympic Hot Springs up Boulder Creek and the Sol Duc Springs on the Soleduc River. Resorts have been built at both localities. The surface water in some parts of this area evidently percolates deep into the ground and is heated by warm underlying rocks. It rises to the surface along fissures in sediments of the Soleduc formation. The youngest known volcanism in this vicinity is Eocene so is probably not the source of the heat.

Many cold springs of mineral content are found. They are usually very small. Several occur along the Upper Dungeness River and one is found near the junction of the Greywolf River and Cameron Creek. Others are up the Dosewallips River. An interesting spring is located on the West Creek tributary of the Dosewallips River. It is just a few feet above the trail below Diamond Meadow Camp and is actively precipitating a layer of white travertine over the rocks and vegetation down the hillside.

### Unusual Boulders

In some of the alpine valleys in the northern section of the park, huge boulders are found scattered over the meadows. They are generally composed of basalt and are seemingly far removed from their source. They were derived from basalt flows in the surrounding valley walls but could not have been loosened and rolled to their present locations. Most of them must have been carried into the basins by glaciers formerly extending down into the valley from surrounding cirques. An interesting example is found in Royal Basin. A huge basalt boulder showing good pillow structure is lodged in a meadow north of Royal Lake. This boulder is so shaped that it overhangs on the west side forming a natural shelter. It is known locally as "Robbers Roost." Another example is a spire-like boulder in the Graywolf Basin. It bears the name "Barrett's Castle."

### Minerals Of The Olympics

The Olympic National Park and surrounding area does not contain any noted mineral localities but the minerals found are both interesting and varied.

**Fig. 7**
**Mount Christy. View looking east from Mount Seattle.**

*Barite*: This mineral is found in veinlets in the Metchosin volcanics in the Hama River Valley in the southeastern part of the Olympic National Forest. The deposit is small and of no economic importance.

*Calcite*: Cleavage masses of white calcite are common in veinlets in the Metchosin volcanics. Tiny transparent crystals have been found in the Soleduc Volcanics on Mt. Deception. Limestone occurs with the volcanic rocks of the Metchosin and Soleduc formations. It is commonly maroon or blue in color and rather argillaceous. Pale green limestone is common on Mt. Deception.

*Cinnabar*: This sulphide of mercury has been reported from one or two localities associated with manganese deposits in the Metchosin basalt on the north side of the peninsula.

*Copper and Copper Minerals*: In 1890 copper mineralization was reported in the Olympics by an early explorer. It was never found in commercial amounts and is usually only present as a trace. Small specks of native copper in basalt and jasper have been found in the Skokomish valley above Lake Cushman. Impregnations of copper sulphides have been noted in sediments interbedded with the Soleduc and Metchosin volcanics. Malachite occurs on Mt. Claywood coating sulphide-bearing sandstone.

*Epidote*: Fine hair-like crystals of light green epidote are common in veinlets in the volcanic rocks. It is especially common around Mount Constance and attractive specimens with white calcite have been found.

*Galena*: Specimens of this mineral have been found in the Olympic but no specific localities have been described. As far as is known the occurrences are in the northern portion of the mountains.

*Gold-Platinum-Garnets-Magnetite*: These four minerals are found in the sands at a few localities on the Pacific Ocean beaches. Several thousand dollars in gold was taken from the coastal area many years ago but nowhere were the claims really rich. The gold is found in very small flakes in magnetite and garnet sand. Platinum occurs with the gold. The sand has been concentrated by the reworking of glacial deposits and it is believed that none of the minerals except perhaps some of the magnetite came from Olympic rocks.

*Manganese Minerals:* The manganese deposits of the Olympics have been investigated from time to time as a source of this critical material. Small lenticular replacement deposits of manganese silicates and oxides are found in the Soleduc volcanics and the Metchosin volcanics. Few mines have produced commercially but many claims and unproductive mines are found wherever the volcanic rocks outcrop. The main problems connected with their economic use has been the silicate ore and the small size of the ore bodies.

The principal mineral is Bementite, a manganese silicate and a rare mineral except on the Olympic Peninsula. Others are: Hausmannite, Neotocite, Inesite, Rhodochrosite, Rhodonite, Tephroite, Manganophyllite, Manganocalcite, Piedmontite, Jacobsite, Pyrolusite, Manganite and Manganomagnetite.

*Pyrite*: This mineral occurs in small patches in the Metchosin basalt on the south side of Mount Constance and is abundant as tiny weathered crystals in the sediments of the Soleduc formation especially in the central portion of the mountains. Limonite derived from the pyrite stains much of the rock on Mount Anderson. Limonite is also common in the quartz veins in the Kimata Basin. Pyrites Creek in the Quinault Valley was named after the small weathered masses of pyrite found in the black slates in that vicinity. Small bright crystals of pyrite have been found in Jasper associated with the manganese minerals at the Elkhorn Mine on the south side of Mount Constance.

*Quartz*: One of the most abundant minerals in the park. It is found in veins and veinlets in the Soleduc sediments and in the volcanics of this and the Metchosin formation. It occurs both as massive milky quartz and as transparent water-clear

crystals. Many of the crystals are stained yellow by limonite. Generally the smaller crystals are the clearest and the larger ones tend to be milky. A few localities are Mt. Anderson, along the upper Rustler River, Mount Constance and Mount Seattle. Near the top of Mount Seattle are found tiny doubly terminated crystals and also some greenish opaque crystals of interesting shape.

Jasper is relatively abundant and most of it is derived from the Metchosin volcanics. It can be picked up on the talus slopes along the Metchosin outcrops and also along the beaches bordering the peninsula where it has been carried by streams.

*Zeolites:* This mineral is found in the volcanic rocks. The varieties Thomsonite and Laumontite are found in the Metchosin formation particularly along Hood Canal. The zeolites fill small vesicules in the basalt.

### Organic Substances

*Oil*: While no oil has ever been reported in the interior of the Olympics, oil seeps have long been known along the Pacific coastal region. Several companies have investigated and drilled but without commercial production. The oil is of high grade paraffin base type and is believed to originate in the rocks above the Lower Middle Eocene.

*Coal*: Small uncommercial coal beds are found in the Upper Tertiary sediments in the northwestern section of the peninsula. At one time a little was mined at Clallam Bay west of Port Angeles. No coal is found in the park.

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| GEOLOGIC EPOCH | EVENTS |
|---|---|
| RECENT | *Erosion*<br>Retreat of the glaciers up their valleys. |
| PLEISTOCENE | Uplift along the coasts, erosion of the mountains.<br>Glaciation of the Puget Sound country.<br>Formation of glaciers in the Olympics. |
| PLIOCENE | Uplift of the present Olympic Mountains and Cascade Mountains. |
| 11,000,000 years ago | Marine sediments deposited in local basins along the Pacific Coast and Grays Harbor area. |
| MIOCENE | *Erosion* |
| 26,000,000 years ago | Uplift of the first Olympic Mountains.<br>Marine and brackish water sediments deposited on north and south sides of the Olympics and along the Pacific coast. Local volcanism. |
| OLIGOCENE<br>36,000,000 years ago | Thick marine sediments laid down over most of western Washington.<br>Sea advances eastward almost to present Cascade Mt. foothills. |
| EOCENE<br>56,000,000 years ago | Uplift in Olympic Peninsula area.<br>Decreasing volcanism deposition of marine and brackish water sediments.<br>Intense submarine volcanic activity. Lava flows poured out over sea floor in the Olympic area.<br>Submergence of western Washington. |
| PALEOCENE<br>71,000,000 years ago | |
| UPPER CRETACEOUS<br>106,000,000 years ago | Uplift, folding of the Soleduc formation, erosion. |
| LOWER CRETACEOUS<br>126,000,000 years ago | Great thickness of sandstone, graywacke and shale deposited in a geosyncline extending north and south across Olympic area. Intermittent volcanic activity. |

Older rock formations are unknown on the Olympic Peninsula.

# FLORIDA FOSSILS

By GEORGE C. OLMSTED
1129 James Boulevard, Signal Mountain, Tennessee

In Sarasota, Fla., go north 3.7 miles from the corner of 9th Street on Washington Blvd., turn left to the Florida Dolomite Co. Ask permission at office to hunt for fossils. Here may be found fossil shark teeth, horse teeth, starfish and manatee rib fragments. All but the starfish are in the dark over-burden. The starfish are in the fossiliferous dolomitic limestone.

A new sub-division just south of Harbor Acres sub-division will yield manatee ribs, shark and horse teeth.

Go south on Osprey Avenue to Cherokee Park, turn right on South Drive to the beach. Shark teeth and manatee ribs may be found at water's edge.

About 8 miles south of Sarasota is the village of Osprey. Go south of post office 0.4 miles and turn right onto new sub-division. The reddish road material is fossiliferous. It has yielded mammoth and as yet unidentified other teeth and bones. The pit where this road material came from should be a fertile hunting ground. On the beach may be found manatee ribs.

At Venice, about 20 miles south of Sarasota, walk north on beach from casino to rock outcrop, which contains fossil turtle shell fragments. Cross small stream, turn right about 100 yards. This is a filled-in area and contains turtle shell, horse and other teeth. Don't step on snakes!

At the hotel at Venice go about one mile south on Harbor Drive, turn right to beach at Venice Villas. Walk north and south to get shark teeth and manatee rib fragments.

The inner rip-rap of the Venice jetties has some fossiliferous rocks.

A valuable companion in this vicinity is J. H. Petit, Gen. Del., Nokomis, Fla. He is a winter resident.

In Sarasota, Lester R. Smith, 319-W. 9th St. (phone 3-7672) knows good fossil grounds. Mr. J. E. Moore, 3810 Bayshore Drive, has an excellent fossil as well as Indian collection. He gave the Bradenton Museum (which you should see) a remarkable collection.

East of Bradenton go out the Travertine Road through the settlement of Samoset (inquire the way) to the Manatee Dolomite Co. Get permission at the office. Examine face of cut. It has yielded fossil teeth of horse and shark, as well as bones of horse, mammoth, manatee and turtle.

This entire area is abounding in Pleistocene mammalian fossils. They are usually found in the dark soil. Examine drainage ditches, new excavations and newly pumped in soil. Remember that Florida was the abode of mammoths, mastodons, camels, both one and three-toed horses, bisons, dogs, peccaries, saber-tooth tigers, etc. At least thirty-three land mammals that once inhabited Florida are now extinct.

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Editor's Note: Sarasota and Venice, both in Sarasota County, are on the west coast of Florida which is bounded by the Gulf of Mexico.

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## CARGILLE'S SETS FOR MICROSCOPICAL STUDIES

Six sets of carefully prepared specimens for microscopical studies in mineralogy and petrology are announced by R. P. Cargille, 117 Liberty Street, New York 6, N. Y. These specimens meet the need for a well balanced assortment of known materials for reference in the microscopical study and identification of rocks and minerals.

One set includes 60 minerals and glasses of known refractive index. The range of the index is from 1.34 to 2.4, with intervals of 0.01 index through out most of this range. These are valuable not only for comparison with unknown minerals by the immersion method of microscopy but are also useful for determining the index of refraction of unknown liquids.

Another set includes 60 powdered minerals selected for microscopical study. There are 3 sets, 25 slides each of comminuted powdered minerals mounted in balsam. Also included is a set of 25 type minerals and rocks for the demonstration of various optical characteristics.

# MID-WEST FEDERATION HOLDS BIG CONVENTION

MRS. E. L. KOPPEN

3376 Brunswick Avenue, Minneapolis 16, Minn.

Approximately 3000 people visited the mineral and geology displays at the 12th annual convention of the Midwest Federation of Mineralogical and Geological Societies held at Macalaster College in St. Paul, Minn., on July 1, 2 and 3, 1952.

The program included displays of minerals and lapidary work and geological items by local societies as well as by other clubs and individuals throughout the midwest. Commercial dealers in minerals and lapidary equipment were on hand to supply specimens and cutting material.

There were lectures by Dr. W. S. Glock, chairman of the Macalaster geology department, on "Geology of the Twin Cities Area;" Dr. George M. Schwartz, head of the Minnesota Geological Survey and a member of the University of Minnesota faculty, on "Minnesota Iron Ore;" and Kenneth Russell, president of Chicago Rocks and Minerals Society, on "Stone Carvings."

Several interesting field trips were arranged. One of the most outstanding trips was to the famous Taylors Falls pothole region, lead by Dr. George A. Thiel, chairman of the University of Minnesota Geology Department.

Mr. W. H. Allaway of Downers Grove, Ill., was elected president; Mr. A. Hedley of St. Louis, Mo., vice president; Mrs. Oriol Grand-Girard of Chicago, Ill., secretary; Miss Marjory Scanlon of Chicago, Ill., treasurer; Mr. Ben H. Wilson of Joliet, Ill., historian. The St. Louis Mineral and Gem Society of St. Louis, Mo., will be host to the 1953 Midwest convention.

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# EYLES TO VISIT AUSTRALIA

Editor R&M:

This fall I intend taking a prolonged visit to Australia, my native country, and will stay probably a year. It is my intention to visit all the famous mining areas in search of specimens. I intend to advertise my trip and will also deal in opals as I know that the opals sent here are in many cases not the kind the boys in this country want.

I am at present getting all lined up—red tape, customs, Australian passport, etc. I plan to fly from Vancouver, B. C., Canada; the plane will stop in Honolulu, Hawaii; Suva, Fiji Islands; and Sydney, Australia, on the 3rd day. I know you are interested in sands and so will try to obtain a sample from each island stopped at and of course from many localities in Australia.

This trip will be considered an expedition —Australia-American Mineral Expedition—and I consider writing it up for ROCKS AND MINERALS. I shall visit such localities as Lithgow (Australia's great iron mining center); Tenterfield, where the finest molybdenite crystals are obtained; Glen-Inness, where topaz and beautiful cassiterite crystals are found; Broken Hill, where some of the world's finest specimens have been found such as anglesite, cerussite, cerargyrite, dioptase, proustite, pyrargyrite, rhodonite, wulfenite, etc. I will take in all the famous opal fields which are widely scattered from Lightning Ridge, Wilcannia, White Cliffs, all in New South Wales, and up to Queensland where the beautiful boulder opal is found. In South Australia I will visit Moonta where copper minerals are mined which compare with any found in the old days at Bisbee, Ariz.

I imagine that next to Ward's of Rochester, N. Y., I am one of the oldest established mineral dealers in America, having been a constant dealer and subscriber for ROCKS AND MINERALS for almost 20 years. And the Editor of R&M will always hold a soft spot in my heart. In the early days, when customers were very few and far between, I remember well how the Editor often wrote me not to worry about payments for ads but to pay when I was able. I am happy not to have missed even a single copy during those long years and that I was able to pay for all ads even when times were very hard.

It is my view that mineral collecting is hear to stay and that with its associate, gem cutting, it has a firm foundation. So fine minerals and precious stones such as opal are a good investment if purchased with some judgment.

Wilfred C. Eyles
Yermo, Calif.

May 7, 1952.

# A TRIP TO HAWAII

By R. L. SYLVESTER

154 Parkside Avenue, Syracuse 7, N. Y.

Well at last we are home from that wonderful land of sunshine—Hawaii.

We had a wonderful trip and met some nice people. Dr. D. G. Chrones (4340 Sierra Dr., Honolulu, Hawaii) and Mr. E. H. Anderson, Jr. (2852 Kakawai St., Honolulu, Hawaii) were very nice and we had a good field trip through them and collected many minerals. Mr. Anderson brought to me, the day before we left the islands, a nice collection of minerals that he had collected at different times and on different islands.

On the islands we found crystallized coral, yellow jasper, brown jasper, opal, red lava cinders, chalcedony, opalized chalcedony, breccia (Mr. Anderson had to let me down 20 feet in a lava pit to collect this), calcite from the travertine mine at Kailua, Oahu Island (this calcite is fluorescent and phosphorescent), gypsum, quartz xls from Kailua (western part of Oahu Island), petrified wood, lava drips, travertine, sands—one is a "salt and pepper" sand from the bay where Capt. James Cook was killed on Jan. 28, 1779. (Capt. Cook had discovered the islands in 1778). I collected a number of sand samples from various beaches on Oahu, Kauai, and Hawaii Islands.

On my trip to Hawaii Island (the largest island in the Hawaiian group), I stopped at the second lava flow of Mount Loa Volcano and the surface is still hot to stand on and at the 3-foot depth its temperature is 900° — nearly 2 years ago this hot lava was flowing down the mountainside at a rate of 6 miles per hour. The eruption started June 1, 1950. I brought some lava home with me from this flow which contains some little xls of volcanic glass. I picked up one piece and it was so hot that I dropped it quickly.

The distance by boat, air and rail from Honolulu to Syracuse is 5,338 miles.

I took colored pictures of the Waimea canyon, (on Kauai Island) called the Grand Canyon of the Pacific. It is 10 miles long, a mile wide and in places 3657 feet deep. Here you can see blue, green, red and gold in colors on the sides of the canyon. It is beautiful to look at. Wild boars and goats are found in the canyon; I saw one black goat but he was far off. I took over 600 feet of colored film motion pictures and a lot of colored slides of Hawaiian scenery, dances, etc., and all this plus some music which I also brought back so now we can have a regular Hawaiian show of our own, when we want it.

**R. L. Sylvester, of Syracuse, N. Y., arriving at the Los Angeles Airport sporting a rock lei. This lei, first one ever known of rock, was made by Dr. D. G. Chrones of Honolulu, Hawaii, who placed it around the neck of Mr. Sylvester at the Honolulu Airport as the latter was leaving for home—May 16, 1952.**

*(Continued on page 406)*

# HOBBIES AND FRIENDSHIPS

By L. W. CARPENTER, M.D.
Limerick, Maine

..."*So often the hobby a man selects*
*Is something to bother his wife with,*
*To bore all his friends, and in other respects,*
*To have the time of his life with.*"
—*Richard F. Armknecht*
*Sat. Eve. Post.* 1/19/52.

The above may be true, no matter what the hobby. Mine is Rocks and Minerals with capitals, and my wife was an active participant from the start. I can truthfully say that after fifteen years she never shows boredom, no matter how lengthy my spiels on streak, hardness or crystal structure.

I had "one foot on a banana peel" when I first discovered that I needed a hobby, due to the fact that I had been too busy laying the foundation for my work, and then just working. The life of a country doctor, beginning forty years ago, was no bed of roses. I used to go trout fishing when time permitted, and it is still a good pastime, but all one has left is a mess of fish, if he is lucky, plus a few discomforts that go with the piscatorial effort. Minerals seemed to provide a better outlet, and as we happen to live in the vicinity of a pegmatite outcrop, Mrs. Carpenter and I deliberately became inoculated with rock hound fever.

I still have the first little garnet that I had ever recognized as such — about the size of a #8 shot. Of course our nearness to a contact zone has made our small collection a little top-heavy, but we think it is good. We enjoy trips to any mineral area, and have made many friends on these field-days and had lots of fun.

Many amusing things have happened, and if I do not bore my readers too much, may I relate a couple that stand out distinctly?

My son, Maurice, and family were on vacation with us from New York. We decided on a short trip (thirteen miles) to Ham's Quarry in Wakefield, New Hampshire. My grandson, Steve, who was but six years old, was with us, part of the time. His father and I discovered some columbite and were so intently engaged in its removal that we forgot Steve. He was hunting rocks also, and all of a sudden came racing around a boulder, tripped and fell, and only missed plunging into the quarry by a foot. He frightened us badly, and his father took him to the shallow end of the quarry where he tried, with indifferent success, to stone frogs. When we were ready to go home, Steve wanted a rock to show mother, and fixed on a piece of feldspar about 18" x 5" x 3". He struggled manfully with it, finally getting it to the car. He had been promised that Grandpa would send him some specimen later, and he was insistent that his chunk of feldspar be put in the box, intact. The next morning, his father and I were sitting on the lawn, waiting for him to finish breakfast before going to the ice cream parlor. I picked up his rock and noted some splendid pyrolusite XLS on one end, (they are not uncommon in that feldspar) and remarked to my son that there was no need to send all that rock to New York, and proceeded to knock off about two inches of the end bearing the XLS.

Just as I had done this, Steve came around the corner on the run. Noticing the rock he stopped in sudden anger, his blue eyes blazing, and shaking his finger at me, yelled, "Grandpa! you've busted' my rock. You don't allow me to touch your rocks! Now Daddy and I are going downtown, and if that rock isn't fixed when we get back something pretty serious is going to happen around here!" I remarked that God had made that rock, and that I had broken it and could not mend it. Steve exploded, "I don't care who made that rock. You smashed it and you fix it."

Another trip was with a clergyman friend, William DuBourdieu, D.D., of Chicago, and our wives. This was to Harvard Quarry in Greenwood, Oxford County, Maine. Mrs. DuBourdieu pro-

vided a wonderful picnic lunch and we had a day made for the trip. We wished to find some good specimens, and Greenwood furnishes plenty, so our load was a good one. We made a litter-like affair of a large burlap sack and two strong poles, and placed our load upon it. Dr. DuBourdieu took the front end —the heavy down-hill end — while I carried the rear and could not see where I was stepping. At the steepest part of the descent, I slipped my foot under a root which apparently lay in wait for me, and "piled up" on all our rocks that weren't rolling down Noyes Mountain. My physical hurts were minor, but my temper was red hot. As I lay there feeling my bones, and collecting my thoughts, the Doctor inquired, with much solicitude, if I were hurt. I informed him I was not, but would hate to tell him what I was thinking. His reply was that of an understanding friend and pastor. He said, "You're wishing those damned rocks were back, just where they came from."

Two years ago my sons and I had the good fortune to discover scheelite in the Limerick-Cornish (Maine) vesuvianite area. (The late Dr. Lloyd Fischer of Bates College has referred to the area briefly). I have already mentioned the scheelite in a former ROCKS AND MINERALS article, and I can assure you its discovery was a thrill, and was the means of bringing us in contact with new friends who have furnished an even greater one. Last summer my sons, Forrest and Maurice, and I made a trip to the garnet area in Minot, Maine, in the very pleasant company of Mr. and Mrs. John Dillingham and their young daughters of Naples, Maine. (We noticed one or two general differences between the Minot garnets, and those from the Limerick-Cornish area. Minot garnets are, on the whole, *not* zoned and edges *not* beveled. The reverse is generally true in the latter area. Such exceptions as we find, serve to emphasize these differences).

Mr. and Mrs. Dillinghan are real mineralogy enthusiasts, and those girls are "going places, fast." They have two very interesting collections, viz: Indian artifacts from the Sebago Lake area, and a beautiful collection of Oxford County, Maine, Minerals.

Incidentally, I would mention the growing collection of Merle Brown, Limington, Maine. (Merle had a good tutor in the late Herbert Haven of Portland, Maine).

Alexander I. Mitchell of East Parsonfield, has a promising collection.

Doctor William Teg, Ph.D., who resides in summer in the town of Hiram, Maine, accompanied Forrest and me to the Silver Lake, N. H., lead mines in the autumn of 1951. We obtained some excellent specimens of galena, sphalerite and siderite. We later attacked the grossularite garnet bearing rocks on Berry's Hill and Day Mountain in Cornish with gratifying results.

I want to mention here Dr. Teg's last book, "Almuchicoitt" (Land of the Little Dog) which gives an account of Indian times in York and Oxford Counties in Maine and a large part of Carroll County in New Hampshire. The author is a good geologist and covers the area in a very interesting manner.

My son, Forrest, and I have found a few especially fine specimens of vesuvianite and garnet this last year. We have exchanged scheelite specimens for other splendid specimens with the following: Horace Slocum, Rock Hill, South Carolina; Vernon D. Richmond, Toledo, Ohio; Mrs. Lucy S. DellaValle, Maplewood, New Jersey; Miss Bickford, a teacher in Portland, Maine; Mr. and Mrs. Ralph Wentforth, Portland, Maine (Mrs. Wentworth is the corresponding secretary of our Maine Mineralogical & Geological Society); Mrs. Mabel Carpenter, Springvale, Maine; Mrs. Mary Carpenter Kelly, Alfred, Maine; Merle Brown, and Robert Peters, Limington, Maine. There are many others and in every instance we have had the best of luck, not only in receiving fine mineral specimens, but in discovering the pure gold of friendship.

Our closeness to the rocks is recalled in Isiah 51-1: "Hearken to me, ye that

*(Continued on page 406)*

# MINERALOGY AS A HOBBY

There are many different types of hobbies — far, far, too many to mention. Some of the well-known are stamp, coin, antiques, sea shell and book collecting. My hobby is mineralogy. I am one of an estimated one million people who collect minerals as their hobby.

What are minerals? Minerals are any natural, inorganic substance of definite chemical composition. Rocks, often classified as minerals, are not truly such, but are a combination of two or more minerals. These beautiful, natural formations are found from pole to pole. Even on Long Island more than thirty well-defined species can be collected. As with the art of stamp collecting, a true picture of world geography can be gained through mineralogy.

Quite a number of magazines are published to help the mineralogist. Among the finest of these is ROCKS AND MINERALS, a bi-monthly issue published in Peekskill, New York. There are also many clubs devoted to this hobby, the two being located in this area are the New York Mineralogical Society and the Queens Mineralogical Society.

Another interesting branch of mineralogy is the amateur lapidary, which cuts and polishes raw minerals into glowing gems. The skill of these amateur cutters often rivals professionals. Agate is very popular with the amateur lapidary because it cuts easily, holds its finished shape, and occurs in many hues.

Many minerals are named after famous people such as smithsonite which was named after James Smithson, founder of the Smithsonian Institute located in Washington, D. C. Two more examples are rooseveltite, named in honor of the late President Franklin Delano Roosevelt, and willemite, which was named in memory of Willem the First, King of the Netherlands. An equally large number of minerals are named after the locality in which they were first discovered. Franklinite from Franklin, New Jersey, and coloradoite from the State of Colorado are two examples.

An unusual variation of minerals are those classified under the heading "Native Minerals." These are extremely useful in the industrial world, as they need not be smelted but can be put to use directly from the mine. Approximately ten minerals exist in this state, and since they are very crystalline and colorful are much sought after by "Rockhounds" as mineralogists are sometimes called. Among the foremost of these are gold, silver, copper and sulphur.

Many rockhounds specifically collect minerals that glow in the dark, when put under the short and long wave ultraviolet fluorescent lights. In the neighborhood of one hundred five of the sixteen hundred known minerals are activated by the two fluorescent lights. The reason that mineralights bring out these hidden colors of minerals is that the ultra violet rays activate certain minerals from certain localities. These so-called black lights cost from twelve dollars and fifty cents to upwards of one hundred dollars. Calcite and willemite, found in abundant quantites in Franklin, New Jersey, are often considered the most spectacular of all fluorescent minerals. Fluorescent calcite which in normal daylight is a plain drab white, radiates the most vivid red you have ever seen when put under the short wave light. Willemite, which is smelted for zinc, when put under the short wave light glows with such a beautiful, unmatchable green that it is a must for every fluorescent exhibit. Incidentally, the word "fluoresce" comes from the mineral fluorite, in which it was first discovered. This fluorite from Cumberland, England, fluoresces a bright blue. Other minerals that show an intense fluorescense are wernerite from Ontario, Canada, which fluoresces yellow; zircons from many localities that fluoresce orange; calcium larsonite from Franklin, New Jersey, which fluoresces yellow, and many more.

Other minerals that contain most unusual properties are lodestone, which is nature's only magnet. This mineral, being dark gray in color, is a variety of magne-

tite and is found in abundant quantities in Magnet Cove, Arkansas. Three more minerals placed in this unusual category are pumice, which will float when placed in a basin of water, talc which has a soapy feeling, and has been nicknamed soapstone, and diamond, hardest of all known minerals and which will cut steel.

I have mentioned only a few of the highlights of mineral collecting. As with all other hobbies, the value of one's collection depends entirely upon the amount of effort and research expended.

Joel B. Rosenthal
116-02 229th St.
Cambria Hts. 11, Long Island
New York
Age 13, 8th Grade Public School

Editor's Note: The above article was selected as one of the best on "My Hobby" in Joel's 8th grade graduating class.

### A No. 1 Publication!

Editor R & M:

May I take this time to congratulate you on the many interesting hours you have given for the betterment of the Mineral Collector, Mining Man and Rockhound's knowledge in the field of Mineralogy?

It is through your efforts that one can escape the not too pleasant reports coming from the War Front, the District of Columbia, and the United Nations. Your ROCKS AND MINERALS has been No. 1 in the line of Publications throughout the year, and I am sure that we will be able to Vote it No. 1 in the years to come.

G. Elmo Shoup
Salmon Idaho

Mar. 1, 1952

### A Little Space Reserved For Paleontology!

Editor R & M:

I would like to go along with Mr. Amel Priest, Peru, Iowa, in his plea for a paleontology department. While not really belonging in ROCKS AND MINERALS magazine, it would be nice to have a little space reserved for paleontology. There is no organization or magazine for the amateur hobbyst in fossils. One thing sure there are a few who are interested in the great story of the Life in the Past. I believe this a very interesting hobby and of great importance to knowledge, certainly a lot of good specimens get lost for lack of interest. So why not have a little space reserved for paleontology.

I sent you my subscription for another year beginning in June.

Karl Zauzig
Haledon, N. J.

May 6, 1952

### Pacific Museum Buys Ur Collection and Shop

We are happy to announce that we have purchased the shop, equipment and entire stock of Mr. and Mrs. E. L. Ur. This includes their huge and justly famous collection of more than a ton of rhodonite.

Fossils from petrified sand dollars to a section of mastodon tusk, jade, moss agate, fine polishing woods, thunder eggs, malachite, etc., plus faceting items such as peridot and crystals.

All interested in the rhodonite or other items of the Ur. shop may now see them at the Pacific Museum, Shell Beach, Calif.

### Wants List Of Addresses

Editor R&M:

Inclosed you will find $3.00 for next year's subscription for R&M. I have enjoyed it immensely. You and your magazine are doing a great deal to promote the hobby of mineral collecting.

The one thing I would like to see is a list of addresses of collectors who would be interested in trading their extra minerals.

Morton Metersky
Route 2
Flemington, N. J.

July 14, 1952.

### Down to Earth Touch!

Editor R & M:

Your magazine has always had an intimate, down-to-earth touch which made the amateur mineralogist feel keenly interested in all that is happening in the mineral world. "The Sand Collector", Club and Society Notes", "World News On Mineral Occurrences", "The Micro-Mounter", "The Shoppers' Guide" and little personal notes tucked in here and there add greatly to the attractiveness of the magazine. Let some of the learned professors donate from their great knowledge but please do not go too high-hat.

Ruth H. Wentworth
Portland, Maine

### Enjoys Editor's Field Trip Articles

Editor R&M:

I have always enjoyed your personal articles describing various trips and it's the "minute details" you bring into them that adds the intimacy and make the readers feel as though they were there with you.

It must be 3 or more years since you took the Mexican trip with Mr. Gabriel yet I can recall as though I read the article yesterday how scandalously expensive the Hershey bar was and how you dropped half of it in the street!

By the way, did you ever have a burro ride as you wrote you wished to? (No—Ed.)

Mrs. Olive Delaney
Yonkers, N. Y.

July 10, 1952.

# WORLD NEWS ON MINERAL OCCURRENCES

**Items on new finds are desired. Please send them in.**

**Abbreviations:** xl—crystal xled—crystallized xline—Crystalline

ALABAMA — A letter dated May 9. 1952, from William M. Johnson, RFD 6, Knoxville, Tenn., reads as follows:

"In reading geological bulletins I frequently run across bits of interest. Such is the case in the Alabama Bulletin #54, Geology of the Alabama Tin Belt.

"I had not known that tin was mined in Alabama. About 40 miles northeast of Montgomery in Coosa County there is an outcrop that carries considerable tin and there has been some mining since 1940.

"Cassiterite is the only tin mineral found in the district. The crystals are black or a dark mahogany color, usually less than ¼ inch long but some have been found up to two inches long. The crystals are largely found in the pegmatites of the district.

"In the general area the following minerals are also listed: albite, apatite, beryl, clinozoisite, corundum, epidote, fluorite, garnet, graphite, hornblende, kyanite, magnetite, microcline, muscovite, olivine, pyrite, quartz, sillimanite, topaz, tourmaline, zircon, zoisite.

"Many of these show up only in the thin sections. Some day I hope to make a trip there to get some samples."

ARIZONA—David P. Record, of the Mission Curio Mart, 4400 Mission Road, Route 3, Box 384, Tucson, Ariz., reports the finding of a rare occurrence of galena with chrysotile. His letter, dated June 5, 1952, reads as follows:

"By separate cover we are sending what we think is a rare occurrence of galena in asbestos (chrysotile) from Chrysotile (Gila Co.) Ariz. There is quite a bit of asbestos at this locality, but this and three other pieces were all we could find with galena."

A small but nice specimen of brownish asbestos (chrysotile) with small, imbedded masses of galena was received from Mr. Record. It is a most interesting specimen and it is the first we ever saw of the two minerals being associated together.

ARKANSAS — The following most interesting letter, dated April 27, 1952, comes from Woodland G. Shockley, Waterways Experiment Station, Vicksburg, Miss. It reads as follows:

"I was much interested in the note in the Jan.-Feb., 1952, issue of ROCKS AND MINERALS by Mr. John O. Griesbach under "Arkansas" in "World News on Mineral Occurrences." He described some of the interesting minerals found in the nepheline-syenite rock at the Arch Street Pike Quarry, Little Rock, Ark. Some years ago I had the pleasure of collecting at this quarry and would like to add a few notes of my own to minerals which I found there.

"One of the better known accessory minerals found in the quarry is reddish brown titanite, found in flat crystals sometimes up to ½ inch in size. Most probably of secondary occurrence in vugs in the syenite are milky to colorless crystals of analcite (up to ¾ inch), often inclosing radiating aegirite crystals.

"In apparently weathered areas of the rock we often found small purple cubes of fluorite (¼ in.) and pyrite (¼ in.). One piece of the weathered rock had a coating of colorless hyalite opal which fluoresces nicely (green) under the Mineralight. Some of the unweathered rock contains hackmanite which fluoresces a faint pink. Much more spectacular fluorescent specimens of hackmanite are found in nepheline-syenite at Bauxite, Ark., however.

"I might mention that all of the above mentioned minerals were described in the Arkansas Geological Survey Report for 1890, "The Igneous Rocks of Arkansas" by J. Francis Williams. Truly there is 'Nothing new under the sun'."

CALIFORNIA—Three handsome specimens have been donated by R. F. Henley, 4075-19th St., San Francisco 14, Calif. One is a salmon colored massive calcite from Ballarat, Inyo Co., Calif. Another is a dendritic white opal on dark green serpentine from Valley Springs,

Calaveras Co., Calif. The last is a dark green massive serpentine encrusted by colorless drusy quartz; the locality is the Aurora Quicksilver Mine in San Benito Co., Calif.

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A new occurrence for scheelite has been found in California. The following letter dated June 3, 1952, from Carl F. Austin, Box 368, Larkspur, Calif., will tell you about it:

"In the attached box is a sample which I thought you might find interesting. It is scheelite from Marin County, California. It is of primary interest as it is from the first recorded occurrence of this mineral in the Coast Range.

"I found this sample while on a field trip with the College of Marin mineralogy class to the discovery area.

"The scheelite was first discovered by Mr. E. A. Bender on whose property the enclosed material was found.

"The following is taken from the California Bureau of Mines' Mineral Information Service, Vol. 4, No. 9., Sept. 1, 1951. 'Exposures of ancient metasediments (Sur series) that have been intruded by granitic rocks (Santa Lucia granodiorite), are found in the Coast Ranges west of the San Andreas fault, extending from Marin County to San Luis Obispo County. Included in the Sur Series are limestone beds which could have supplied the proper conditions for tungsten mineralization. Such beds are found in the vicinity of the Marin County discovery and are probably related to its origin.'

"The specimen that I am sending you is rather poor as it is "float." However it is the best I could get at the time. It shows a little fluorescence."

The sample consists of tiny white grains which fluoresce greenish blue. Its locality is the Bender Farm, west side of Tomales Bay, Marin Co., Calif.

COLORADO — The following letter comes from a young collector, Stewart Pickford, Steamboat Springs (Routt Co.), Colo. It is dated May 16, 1952, and part of it reads:

"I would like to see a little more publicity on this section as I have found some very nice minerals around here. I am sending you some pyrite and a piece of fossil (I believe), from just west of Steamboat Springs. There are literally thousands of them in a cut-bank, west of town. Besides this there are many other kinds of fossils.

"About 30 miles north of here are some mountains that used to be famed for gold. One is Hahn's Peak, of which you have probably heard. On it, I am told, are some fine square crystals of quartz. About 20 miles east of there, there are a chain of mountains known as the Sawtooth. One peak, Mt. Agnes, produces a type of garnet and also calamine. West of town, about 30 miles, is Pilot Knob, one of the largest anthracite coal mines in the world. So you see, we don't lack minerals around here."

Three specimens have been received. Two are small xled pyrites, the 3rd is some type of fossil, possibly belonging to the coral family; it is grayish in color with a fibrous structure.

Stewart is a freshman in high school and very interested in science. He thinks he will major in Geology and perhaps in Mining Engineering.

CONNECTICUT — Wilbur J. Elwell, 2 Duck St., Danbury, Conn., dropped in to see us on June 6, 1952, bringing 2 nice specimens which he had collected a few months ago at the abandoned pegmatite quarry at Branchville, Fairfield Co., Conn. One specimen consisted of large deep black biotite xls on albite; the other a nice black tourmaline xl on matrix.

"Can you imagine finding such nice specimens at Branchville!" he said to us as we were admiring them. "Who said the old quarry is dead? But that is not all I found. As I was crouched down digging the specimens out of a long shallow hole, using a very short handled hoe, I dug out also 5 live snakes without realizing what they were at first. Did I get a scare when the snakes started wriggling around me! Boy, I made one leap and left the spot in a hurry!"

DELAWARE — Marl (greensand) has been dug from the Cretaceous deposits at St. Georges, New Castle Co., Del.

FLORIDA — Some very fine petrified shark's teeth, grayish in color, have been found around Mayport, Duval Co., Fla., by Capt. F. J. Smith, P. O. Box 905, Mayport, Fla. A number of specimens have been received from Capt. Smith; these are all mounted on cardboard, vary from tiny up to 1½" in length, and make an attractive display.

GEORGIA — Nice translucent masses of rose quartz have been found near La Grange, Troup Co., Ga.

IDAHO — Two nice specimens, one partly xled, of purple fluorite, have been sent in by G. Elmo Shoup, P. O. Box 756, Salmon, Idaho. Mr. Shoup collected them in drift on Prospect Hill above Squaw Creek, 24 miles below the road on Salmon River, 98 miles from Salmon (Lemhi Co.), Idaho.

Some samples of massive quartz, one stained green by nickel, was also sent in by Mr. Shoup. The locality is Lower Salmon River, in Lemhi Co., Idaho.

ILLINOIS — From Roger Maserang, Box 395, R. R. 1, E. Carondelet, Ill., we have received 2 geode specimens (a 2" whole one and a 1" broken one). The whole one contains loose grains of some sort which rattle when the geode is shaken—rattling specimens of this kind are called "Nature's Rattleboxes." Both specimens are dark gray in color; the interior of the broken one is massive chocolate-colored calcite.

A letter from Mr. Meserang, dated April 29, 1952, reads:

"The specimens are from North Dupo, St. Clair Co., Illinois, where they are found in banks of yellow clay along the edges of the Mississippi River bluffs. I have also found these specimens lying just inside the entrance of a cave from which water seeps slowly.

"They are found in sizes from a quarter of an inch up to about 2 inches in diameter, many with weird shapes, and some with a loose particle in the center which may be heard to rattle.

"Of the approximate ten or so that I have opened all have the same chocolate colored interior."

INDIANA — Not long ago we received a nice specimen of indianaite (halloysite), from E. H. Sarles 2026 Elm Ave., Norwood 12, Ohio. Indianaite is a white porcelain clay and the locality for the specimen is Huron, Lawrence Co., Ind. Colorless allophane coated one face of the indianaite.

IOWA — Two specimens, chert and oolitic limestone, have been received from Amel F. Priest, Peru, Iowa. A letter sent with the specimens and dated May 26, 1952, reads:

"On a trip to the western part of the State I found some chert full of fusulinas, quite interesting to me and new. This came from Red Oak (Montgomery Co.,), Iowa, 1 mile north of the town in a limestone quarry. The black chert was literally all over the place.

"Then at Legrand (Marshall Co.), Iowa, there is a thick layer of oolitic limestone in a quarry north of the city. This also was interesting to me and was said to be grains of sand kept in motion by the action of the waves on the sea bottom till coated with lime and then cemented together. Look at it thru a glass. This quarry is world famous from the crinoids which has been found here. These crinoids occur in nests or large groups and one of these nests hasn't been exposed or uncovered now for a period of 3 years."

Fusulinas are tiny fossils which look like grains of oats. The specimen from Red Oaks is a dark gray chert thickly embedded with tiny whitish fusulinas. The other specimen from Legrand is a nice gray oolitic limestone.

KANSAS — Amber occurs in lignite beds along the banks of Smoky Hill River about 5 miles south of Carneiro in Ellsworth Co., Kans.

KENTUCKY—Siderite has been mined as an ore of iron at the Preston Ore

Banks, Preston, Bath Co., Ky., where it occurs in oolitic form.

LOUISIANA — Marl, a soft earthy form of calcium carbonate, occurs at Sicily Island, Catahoula Parish, La.

MAINE — Forrest Carpenter, Limerick, Me., has found another interesting mineral. (He and his father, Dr. L. W. Carpenter, appear to be the two most active collectors in Maine and—always finding something new). A letter from him, dated June 2, 1952, reads:

"I am sending you a sample of a peridotite boulder which I found in a gravel pit at Newfield, York Co., Maine. The boulder weighs approx. 200 lbs. and I think it contains the best augite crystals (dark green) for this area that I have ever seen. Outside shows the weathering of olivine but this extends only ½ inch and the rest of the rock is in excellent condition. I have it on my front lawn in Limerick, Me."

MARYLAND — Some few months ago a number of specimens were sent in for identification by Brian McKnight, 214 Washington Ave., Chestertown, Md. Among the lot was a very small specimen of fayalite, a dark brown to black mass with a metalloidal luster, one surface showing yellow-blue-green-red tarnish. As this was a new mineral for Maryland, we requested a larger piece and some notes on its occurrence although we suspected that the mineral may have been brought in as ballast—considering that Chestertown is a little city on Chester River (near Chesapeake Bay). A nice 2½ x 2½ dark grayish-black specimen was received in due course and also a note dated May 12, 1952, from Mr. McKnight, reading:

"Yes, it was a boulder. It was found under piling on the wharf. Probably brought in as ship's ballast."

Fayalite was first found on Fayal Island, in the Azores, where it occurs as nodules in volcanic rocks. The Azores are a group of islands in the Atlantic where ships frequently stop—the Chestertown fayalite may have come from Fayal Island?

A second letter from Mr. McKnight, dated June 17, 1952, is of interest but we still believe the fayalite came from the Azores.

"The fayalite probably brought on a ship from Africa. This ship, the S. S. Wm. Mckinley, left from New York City, Baltimore, and Chestertown in 1922. It carried a cargo of assorted manufactured goods. Most of the passengers died of fever and were buried on the beaches where they happened to be. A cargo of peanuts and shells was carried on the return trip. Stopped at Azores. Trip took eight months."

MASSACHUSETTS — Nice specimens of grayish, compact fibrous masses of zoisite have been found at Huntington, Hampshire Co., Mass.

MICHIGAN — The summer of 1952 issue of Gritzner's Geode, is a collector's guide to the Wolverine State (Michigan). It is a most interesting publication as it is devoted to the rocks, minerals, mineral localities, mineralogical museums, mineral collectors, etc., of Michigan. Published by Gritzner's Minerals, 135 N. Sirrine St., Mesa, Ariz.

MINNESOTA — A nice dark green serpentine pebble (gem quality) has been found near Fairmont, Martin Co., Minn., by A. F. C. Heiser, Box 165, Fairmont, Minn.

MISSISSIPPI — Small fossil shells, mostly gastropods, occur in a reddish weathered marl in the banks of the Chickasawhay River, near Hiwannee, Wayne Co., Miss.

MISSOURI — Nice masses of yellow compact yellow ocher (limonite) have been found at Cape Girardeau, Cape Girardeau Co., Mo.

MONTANA — Dendritic xls of native copper on altered monzonite have been found in the Bell Mine (copper), Butte, Silver Bow Co., Mont.

NEBRASKA—Kaolin occurs at Prince Creek, Cherry Co., Nebr.

NEVADA — Rough reddish nuggets of cinnabar have been found in the Quinn Canyon Range, Nye Co., Nev.

NEW HAMPSHIRE — Grayish xls of chlorite pseudo after staurolite are found at Claremont, Sullivan Co., N. H.

NEW JERSEY — The following letter, dated April 26, 1952, is from Morton Metersky, RD #2, Flemington, N. J.:

"I would like to report the finding of a crystal that had me baffled for almost a year. When I describe it to you, you will understand why. It has the general characteristics of galena. Hardness, streak, luster, everything was that of galena, all that is except the crystal form. Recently I had the chance to meet the Assistant State Geologist, and he told me that the crystal form was of garnet, so now I know that it is galena replacing garnet. It was found at Sulphur Hill in Andover, Sussex Co., N. J., it is about ¾" by 1". It is an almost complete crystal. Also it is twinned.

"I found also another strange and very colorful rock. It is called an agglomerate rock.

"From your magazine I have found friends all over the country. It has helped me to greatly enlarge my collection. When I started subscribing to R & M my collection numbered about 250. Now after 6 months my collection is somewhat near a 1000. So I am greatly endebted to you, and when the time comes, I will renew my subscription."

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J. Kent Perry, RD #1, White House Station, N. J., has found some interesting quartz xl groups near Sargentsville (between Flemington and Stockton), Hunterdon Co., N. J.

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An interesting find was made last fall, at the Basalt Quarry at Pennington, Mercer Co., N. J., by Newark Mineralogical Society (see R & M, March-April, 1952, p. 173). The mineral found was jasp-opal and 3 nice specimens were sent us by E. J. Talamini, 164 Chestnut St., Kearny, N. J. A letter from Mr. Talamini, dated May 5, 1952, gives information on the mineral:

"Under separate cover you will receive three specimens of the jasp-opal. It seems to come in a number of colors, the black being the most common. The pipe which shows very clearly in the west wall of the quarry, is at least 70 feet wide as of last December and is just shot full of the material. The base rock is all rotted by the high chlorite impregnation. It is so badly broken up that most of it can be broken in your hands.

"Hope the package reaches you in good condition. It will not stand much hard handling even tho it's packed with a lot of paper."

The specimens arrived in good condition and are most interesting, one is black, another brown, the 3rd green (with bluish chalcedony encrusting a large cavity). All specimens are of nice size.

NEW MEXICO—Small lustrous cubes of pyrite on grayish limestone have been found at the Riccon Gold Mine, Golden, Santa Fe Co., New Mexico.

NEW YORK — In the Nov.-Dec., 1948, R & M, appeared a short article on page 912 — "Pre-Cambrian Conglomerate near Peekskill, N. Y.", by Thomas W. Fluhr, Downsville, N. Y. Mr. Fluhr ended the article as follows:

"This is the first time that a conglomerate has been observed in the Highlands gneiss series of formation. It is a worthy addition to the other unusual geologic features observable in the vicinity of Peekskill."

A letter from Mr. Fluhr, dated June 9, 1952, gives more information on the conglomerate. Part of it reads:

"In regard to article I wrote on "Pre-Cambrian Conglomerate near Peekskill", you will be interested to learn that Dr. Walter Bucher of Columbia University (New York City) found fossils in the

formation thus making it Paleozoic in age."

The above conglomerate was exposed in a sand pit, close to the northern limits of Peekskill, near the N/W corner of Westchester Co., N. Y.

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THE PEEKSKILL EVENING STAR, Peekskill, N. Y., in its issue of Mon. May 26, 1952, announced that on Thurs., May 22, 1952, bones of a prehistoric monster were uncovered by a clam-shell shovel in a grading project on a farm in the vicinity of Harriman, Orange Co., N. Y. The discovery was made by Christopher Schmick and John Leinweber of the contracting firm of Garcia and Leinweber of Warwick, N. Y. The bones included two sections of one of rear legs, and a side of the lower jaw with a perfectly preserved molar tooth which measured 8 inches. When measured, the jawbone, from hinge to point was nearly 40 inches long, while the leg sections when assembled were 68 inches high.

The bones are being kept in the basement of Mr. Leinweber's home in Warwick.

In the Thurs., May 29, 1952, issue of the EVENING STAR, it was announced that the bones had been identified as those of a mastodon. Dr. Edwin H. Colbert, of the American Museum of Natural History, New York City, was said to have made the identification from photos submitted to him.

NORTH CAROLINA — Nice specimens of white, compact-fibrous masses of zoisite associated with massive blue-gray corundum have been found at the Buck Creek corundum mine, Buck Creek, Clay Co., N. C.

NORTH DAKOTA — Sandstone is quarried at Linton, Emmons Co., N. D. If any reader has visited the quarry, we would be interested to hear what minerals, if any, he may have found.

OHIO — The following letter, dated June 4, 1952, comes from Vernon D. Richmond, 1018 Mott Ave., Toledo 5, Ohio. It reads:

"Am sending you two specimens of Barite that are samples of the mineral which was found at the quarry near Weston (Wood Co.), Ohio, in the last visit my friend, Elmer Edenburn, and I made on May 31st. We were most fortunate in opening up a new cavity there that was literally lined with some of the most beautiful blue Barite one could desire. Some of it was in crystal formation and a good bit of it was loaded with large rosettes.

"I estimate that we must have removed seven hundred pounds from this one opening. Two of the slabs weighing around a hundred pounds each were among some we retrieved without a blemish. This, I believe, is the best Barite ever taken from the Weston quarry.

"The chisel-point Celestite cavity we discovered at Woodville (Sandusky Co.,) Ohio, has run out. After the third blast in that Celestite locality the cavity completely disappeared. But from the time we discovered it last November and the next blast in February we took out around four hundred pounds of chisel-point Celestite, some with crystals six inches long. This was the find of a lifetime for Mr. Edenburn and I, even though we nearly froze when we were getting it out.

"Enclosed is my renewal subscription for your fine magazine. I read it from cover to cover and find it the most interesting book that one who likes minerals would desire.

"Anxiously waiting for your next issue!"

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Another letter has been received from our good friend, C. O. Gettings, 2001 Starr Ave., Toledo 5, Ohio. It is dated June 7, 1952, and it reads:

"Reporting on Ohio.

"We made the usual spring trip to Flint Ridge, (Licking Co., Ohio), several weeks ago and came home with several

unusually good specimens. Several groups of quartz xls up to ½" light smoky, containing three inclusions; first red hematite, second black goethite, and third a light brown straw colored needle like xl which I have been unable to identify.

"In a mud bank I dug out the largest piece of chalcedony I have seen from the "Ridge." This piece is about four by six inches, lightly banded, translucent to nearly transparent, and showing green cloudlike inclusions on the edges. I look forward enthusiastically to cutting and polishing it. Warning! There are snakes at Flint Ridge. My son, Duane, was bitten on the hand by a very pretty young snake, eighteen inches long. We rushed both him and the snake to the hospital at Newark, Ohio, where three Doctors identified the snake as a young Copperhead. Duane received anti-venom shots and that was the sad end to the day. He is now fine. His opinion of snakes has changed.

"Very good quartz xls with inclusions similar to those at Flint Ridge are found near Sinking Spring (Highland Co.), Ohio. Here the quartz xls are found on oolitic limestone.

"Several months ago I purchased a part of an old collection containing several polished agates from antique jewelry. I am enclosing a picture of one of the cabs (enlarged four times). This is the most perfect tree and shrub I have ever seen. There is a story that many years ago an old German was able to produce these cabs synthetically. I have examined this cab under a high powered glass but it looks genuine. Maybe one of the readers can tell the rest of the story.

"I am sure that many collectors are confronted with the same problem I have. In the course of collecting, many good specimens are replaced by some superior. These good specimens accumulate and should be put to some good use. This year I contacted the science teacher and the principal of a local grade school. I offered to fill a case with specimens if they would furnish the case. The manual training class with the careful supervision of the teacher made a fine case, complete with lock and fluorescent lights. Yesterday I filled the case and made the formal presentation to the school. I am enclosing the newspaper picture of the event. I feel much can be accomplished this way. Publicity was brought to our mineralogical society and the pupils will benefit for years to come.

"Under separate cover I am sending you our Annual of the Toledo Naturalist Society. Read 'Naturalists' Utopia,' on page 15."

The Annual is a 75 page publication and "Naturalists' Utopia" is an interested article that was written by Mr. Gettings. The article is on Flint Ridge and it covers the botany, zoology, archaeology, geography and mineralogy of the famous Ohio landmark.

OKLAHOMA — Small nuggets of native copper have been found near Kenton, Cimarron Co., Okla.

OREGON — Near Durkee, Baker Co., Ore., are found handsome specimens of the green variety of jasper called plasma. Because of its green color and toughness, this plasma is sometimes locally called Oregon "Jade."

PENNSYLVANIA — The following letter, dated May 31, 1952, comes from a subscriber in Girard, Erie Co., Penn. It is printed in full:

"I am writing concerning a rock formation I have found which might be of interest to you and the readers of ROCKS AND MINERALS.

"The formation is what is known as cone-in-cone and is a limy shale. Cone-in-cone is an odd formation that is believed to be formed when pressure forced soft material up through weak places in the existing rock layers. This is proven by the fact that the cones sometimes cross bedding planes in the rock. The cones are in tightly packed groups with the spaces also filled with limestone.

"By very careful hammering the cones can be separated from the rest of the

rock. The cones vary in size but average one inch in height. The sides of the cones have ribbed markings that often resemble ferns. The imprints left in the surrounding rock often shows this better than the cones themselves. This leads many to suppose that they are fossils, which, of course, they are not. Incidentally, in this same locality many fossils of sea shells are found.

"These cones are unusual and highly interesting formations.

"When I first found these cones I had no idea what they were. I looked in all the books I could find but found no mention of cones. No one around here knew what they were. Just recently I obtained the book, "The Rock Book" by Carrol Lane Fenton and Mildred Adams Fenton. Lo and behold on plate No. 42 I found a picture of these cones, the caption stating they were from North Girard, Pennsylvania. (Girard and North Girard are now almost one town).

"These cones can be found in Elk Creek bed where it flows through the two towns but they are few and far between. I have located a locality farther up the creek where the creek bed is strewn with the cone formation. Evidently this must be the place where they were originally formed. There are, and this is no exaggeration, tons of the material in this locality.

"The difficulty arises in getting to the locality. The only practical route requires crossing one of the local farmer's pasture. I have obtained permission for me and guests to cross this pasture. I strongly urge anyone wishing to visit this locality to contact me and I will gladly make the trip with them. This locality has been almost untouched by collectors and how much you bring back is limited only by how much you can carry. I have much of this material and will gladly exchange them for mineral specimens. I am particularly interested in Pyrite, Marcasite, and Chalcopyrite but I will trade for any type of minerals.

"My name and address is:
Robert L. Cox
228 Elk Creek Ave.
Girard, Pennsylvania.

"I hope this "find" will be of interest to other collectors. Under separate cover I am sending you samples of these cones."

RHODE ISLAND—Donald S. Wrathall, 47 Common St., Providence 8, R. I., informs us that at the Portsmouth side of Mt. Hope Bridge, in Newport Co., R. I., there is an occurrence of greenstone carrying pyrite xls. The pyrites are dark brown cubes and many nice ones have been found in the loose chunks of greenstone. The clue to the presence of the pyrite is that the exposed surfaces of the greenstone show weathered rectangular holes — if these chunks are broken open, pyrite xls will be found inside — those not showing cavities have no xls.

On one trip, a group of young girls were at the locality trying to find xls. They were soon greatly amazed over the fact that every rock Mr. Wrathall broke open showed xls, while those they broke open showed none.

SOUTH CAROLINA — Nice amethyst xls have been found near Lowndesville, in Abbeville Co., S. C.

SOUTH DAKOTA — Beautiful specimens of canary yellow carnotite coating fragile gray sandstone have been found in Craven Canyon, Fall River Co., S. D.

TENNESSEE — Asphaltum (black viscous mass) has been found in seams in limestone at Perrys, on fork of Blue Buck Creek, Hickman Co., Tenn.

TEXAS—Nice agates have been found on Agate Hill, on the Terlingua Road, 20 miles south of Alpine, in Brewster Co., Texas.

UTAH — Lovely specimens consisting of greenish-blue crusts of aurichalcite on deep blue azurite filling cavities in a brown limonite, have been found in the copper mines at Ophir, Tooele Co., Utah.

VERMONT — In the last issue mention was made of some interesting minerals being found on the farm of George W. Lowe, Box 192, Randolph (Orange Co.), Vt. He has found some more and among them are:

*Epidote*—2" long striated greenish xl on massive smoky quartz.

*Hematite*—black platy lustrous xl on mica schist associated with slender greenish xls of epidote.

*Molybdenite*—foliated, grayish metallic mass with muscovite on flesh colored feldspar.

These minerals were found by Mr. Lowe on his farm. We hope he will find many more.

VIRGINIA — Commander John Sinkankas, 1107 S. Oakcrest Road, Arlington, Va., in his letter dated May 18, 1952, informs us that the U. S. National Museum in Washington, D. C., recently acquired a blue topaz xl of large size from Silas Morefield, of Amelia Court House, Amelia Co., Va. The crystal was found during the development of a pegmatite dike on Mr. Morefield's property. It is of a fine blue color and shows several well developed and smooth faces.

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Miss Helen L. MacLeod, 4826 Butterworth place, N. W., Washington 16, D. C., informs us in her letter dated May 11, 1952:

"When the Washington Lapidary Club made a field trip to Rose River in Madison Co., Va., it included a most varied personnel including a cocker with 5 tiny pups and a 6 weeks old baby girl named Lani MacLeod. Unakite was liberated from the stream bed, also jasper, drusy epidote, and plum colored rhyolite (?) with white orbicles. People wading around in a stream and not fishing (a good fishing stream, too) struck local folks as odd. Such is springtime!"

WASHINGTON — Dark red xline masses of essonite (garnet) associated with molybdenite, have been found 4½ miles S/E of Carlton in the Methow Valley, Okanogan Co., Wash.

WEST VIRGINIA — Nice specimens of red hematite have been found in the hematite mine 1 mile S/E of Keyser, in Mineral Co., W. Va.

WISCONSIN — Native copper has been mined at Mineral Point, Iowa Co., Wisc.

WYOMING — Nice specimens of bornite have been found in the Encampment district, Carbon Co., Wyo.

ALASKA — Mottled jasper, mostly reddish, and fossiliferous jasper (reddish with white fossils) have been found on Kuiu Island, Southeastern Alaska.

ANTARCTICA — We are indebted to Miss Helen L. MacLeod, 4826 Butterworth Pl., N. W., Washington 16, D. C., for the following:

"Bunger Oasis in the Antarctica, famous in the news, supplies the bold! patterned copper and dark gray granite, gneiss, while epidote-rich rocks, some resembling unakite, were found in the unnamed islands lying off the Knox Coast. These specimens were collected by M. L. Peterson, 933 N. Longfellow St., Arlington, Va., during a Navy expedition and are being eyed hungrily by the cab cutters of the Lapidary Club of Washington. The main interest in these specimens is the locality, for people like to own "the cab from furthest south." The specimens are of nice color, too, and are capable of a good polish."

ARGENTINA — In the last issue of R & M, mention was made of W. T. O'Gara, Punta Arenas, Chile, making a trip north to Buenos Aires and Montevideo. At one of the stops in San Julian, Santa Cruz province, Argentina, he was able to gather for us a number of pebbles at the airport. Among the pebbles were good quality brownish and red jaspers, black basalt showing bluish-gray chalcedony in a small cavity, dark red granite, and dark gray porphyry.

San Julian, on the Atlantic side of the

province, is about 1275 miles south of Buenos Aires, the capital of Argentina.

Mr. O'Gara is no longer in Punta Arenas as the climate there was bad for his health, so, on his doctor's orders, he had to leave that area. Just as soon as he is settled again, in some northern country as Peru, Venezuela, or Colombia, he will write us.

AUSTRALIA — Another letter, dated May 1, 1952, has arrived from H. H. Batchelor, Box 98, Hughenden, N. Queensland, Australia. Part of it reads:

"Rain is as far off as ever. Hughenden is a very dry locality as we have been 18 months without rain and a lot of stock and game have perished for lack of food and water.

"Hughenden is situated approx. Long. 143°, Lat. 20° and is on the head waters of the Flinders River now dry. Two years ago during the floor it was 4 miles wide. Yes, Hughenden is on all maps. It is a frontier town on the railway going west to Mt. Isa and Cloncurry. Until rain falls, perhaps next Dec. and Jan., prospecting is out of the question.

"I discovered the peridots during 1924 (150 miles N/W of Hughenden in the upper Gilbert River Country) whilst kangeroo hunting and prospecting for gold.

"There are no towns north of Hughenden, until one reaches the Gulf of Carpentaria. The names on the map mean nothing, just cattle ranches, water holes, and old mining camps.

"Trachalytes and tektites are identical, a better name would be obsidianite. They are of meteoric and volcanic origin. I believe a few have been found in the Philippines. Some of my clients who bought the tektites wrote back saying they were jasper. None of the self-styled experts and gemmologists can agree on their origin. Have you ever seen obsidian in shades of green, cornflower blue, dark navy blue, and sky blue? Trachalytes are infusible under the blowpipe and very rare — just a few scattered over the surface, perhaps ½ an acre.

"The Alexandrite country, 300 miles south of here, is too dry. But the pale blue tektite country is only 40 miles north of Hughenden, but in a very wild and rugged country."

BRITISH GUIANA — A small nugget of silvery-white potarite has been received from C. L. C. Bourne, 185 Charlotte St., Bourda, Georgetown, British Guiana. Potarite is a natural alloy of palladium and mercury and its locality is the Potaro River in British Guiana, where it was first found and named after the river.

CANADA — A nice silky, greenish asbestos (serpentine) from the Johnson Mines in Thetford, Quebec, Canada, has been donated to R & M by Mrs. Ruth Wentworth, 135 Main Ave., Portland 5, Me.

"They consider this very choice, and give out little. It is now used for making theatre curtains," reads a paragraph in a recent letter from her.

CUBA—Nice masses of common opal, greenish-brown, mottled, have been found at Luanabacoa, Havana Province, Cuba.

EGYPT — Flesh-colored massive calcite has been found at Wadi Sanur, Nile Valley, Egypt.

ENGLAND — Nice loose xls of calcite with a brownish tinge have been found in a limestone quarry near Flax Bourton, Somersetshire, England.

GREECE — A most interesting letter has been received from John J. Lavranos, 1, Papadiamantopoulou St., Athens, Greece. Part of it reads:

"I am delighted to receive your magazine which, as I have been told by a mining specialist of the American Mission in Athens, is most interesting and informative.

"You state that you are especially interested in certain minerals such as agate, amethyst, magnetite, opal, etc. Most of the kinds you mention are not to be found in Greece so far as I know, except in very rare instances. This however, does

not apply to magnetite which is encountered usually in non-crystallized forms on the island of Seriphos. Native gold is found in some quartzites in the south of Euboea, it also occurs in certain river sands and quartzites of Macedonia, but so far I have been unable to trace even a single specimen. The same applies to native silver crystals which occasionally occur in the baryte deposits of Milos island.

"I can certainly send you sands from various beaches. These sands present considerable differences from place to place.

"Unhappily I have never run across a specimen from Albania. This country is now completely inaccessible as you certainly know.

"I think I will be able to send you some specimens from Crete, since mining operations there are being reorganized at present. Mr. J. Thattaris, Assistant Curator at the School of Mineralogy of the Athens University, who is a friend of mine and has a fairly complete collection of Greek Minerals will surely help me to satisfy your wishes.

"Corfu is extremely poor in minerals since there exist no igneous or metamorphic rocks on that island. There are only various forms of calcite and gypsum of which I will send you some samples. I was told that the western part of the island yields some traces of pyrolusite, but have been unable so far to check the accuracy of the relevant reports.

"Owing to difficulties concerning consignment of these specimens I will have to send rather small ones, which I hope will not constitute too great a defect. I will try, however, to send the best pieces available and wish to request you in advance to freely write me all relevant remarks and even criticisms.

"At the present moment I have available and will send you the following specimens:

1. *Beauxite*—Mt. Parnassus area (51st kilometer Amfissa-Gravia Road).

2. *Baryte*—Milos Island (characteristic specimens).

3. *Molybdenite* — from the Salonica district.

4. *Galena*—from Laurium.

5. *Steatite — from* Mt. Hymettus (Kesariani).

6. *Quartzite with rhodochrosite* (?) — Chalcidice.

7. *Fluorite crystals* — Laurion area (Legrena).

"I will also include two fragments of stone razor-blades. These blades date from appr. 1400 B.C. and were made of obsidian, a volcanic rock found on island of Milos. They may interest you, although they are of no particular value.

"Now I must point out the fact that in Greece we mineral collectors are facing considerable difficulties resulting mainly from the fact that communications are defective and we are bound to the close neighborhood of our residence; in my case, Athens. Therefore, we have to rely on the contribution of friends or mining corporations living or operating in other districts of the country. Things for us are much more difficult than they are for you."

IRELAND — Large dark brown tourmaline xls have been found on Three Rock Mountain in Dalkey, Co. Dublin, Ireland.

JAPAN—Nice reddish xls of andalusite have been found in mica schist at Shimoshima, Yamashiro Pr., Honshu Island, Japan.

MEXICO — Good specimens of martite, black and xled on dark red hematite, are found at the celebrated iron mine at Cerro de Mercado, Durango, Mexico. (For a description of this mine see July-Aug., 1949, R & M, pp. 368-371 — "Collecting Apatite Crystals at Durango, Mexico," by Louis W. Vance).

NIUE ISLAND — This little island in the Pacific belongs to Great Britain and was discovered by Capt. James Cook (1728-1779), a celebrated English navigator.

Niue is situated about 350 miles southeast of the Samoa Islands in lat. 19° S., long. 170° W. The island is about 30 miles in circumference and about 220 feet

high, consisting of coral limestone. There are many caves on the island which are not only curious, but wonderfully beautiful due to the vast number of stalactites which hang from the ceilings, and to the stalagmites which cover the floors.

From one of these caves, Max Haleck, Pago Pago, Tutuila, Samoa, sent R & M a nice 2" section of a light brown stalactite that fluoresces yellow under a long wave lamp.

Niue is also called Savage Island, and was so named by Capt. Cook on account of the behavior of the natives, who not only declined his offer of peace but attacked him "like so many savages."

PANAMA — Burton E. Davis, Box 1181, Cristobal, Canal Zone, has sent us 18 thin slabs embracing agate, moss agate, petrified wood, and siliceous oolite. All these were sliced from small boulders or large pebbles that came from the fill on the west bank of the Panama Canal opposite Balboa (on the Pacific end).

A paragraph in his letter, dated May 19, 1952, reads:

"From October, 1951, to May, 1952, I designed and built an oscillating slabbing saw which will take a 12, 14, or 16 inch blade. It works perfectly and I'll match it against any saw on the market. Eyles, in his book on the diamond saw, does not mention the oscillating type, probably because he does not recommend it, but he is bucking the opinion of industry which uses it in cutting metal rods, pipe, etc."

Three other nice minerals were also received from Mr. Davis. They are — analcite, colorless, xled, from the Gaillard Cut at Empire; drusy colorless stilbite with large colorless calcite xl from quarry along Pan American Highway near Capira; and pyrolusite (black mass) from near Porto Bello — all localities in the Canal Zone.

PHILIPPINES — G. H. Haldén, 270 Lewis Ave., Millbrae, Calif., sent us an interesting specimen from the Philippines — a xline galena associated with xline pyrite. The locality is a prospect in Camarines Sur, Southern Luzon Island.

SCOTLAND — In a letter dated June 7, 1952, from C. O. Gettings, 2001 Starr Ave., Toledo 5, Ohio, is a paragraph.

"This week I received several very fine specimens from a collector in Scotland. The specimens consist of smoky quartz and fluorite on pink calcite. The quartz xls contain inclusions of dark green tourmaline. These are from Kempock Quarry, Gourock, (Renfrew County), Scotland.

SOUTH AFRICA — An interesting specimen of dark brown concretionery limonite, and a number of small loose concretions (look like rounded brown pills) have been donated to R & M by Dr. Claude H. Barlow, Box 54, Trumansburg, N. Y. The specimens are from Swaziland, South Africa, and were collected personally by Dr. Barlow during 1951, while working on a scientific project in South Africa.

Swaziland is a territory about the size of Wales lying between the Transvaal and the Portuguese province of Lourenco Marques.

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**A Little Criticism of R & M!**

Editor R&M:

I would like to offer a little criticism of R&M as I noticed something more so in the last issue than in any of the preceding issues. Out of 112 pages 38 were devoted to advertisements and that is a little better than 1/3 of the total number of pages. Although I use the advertisements for buying mineral specimens. I do think they could be kept to a minimum number of pages. In my estimation 38 are too many pages of advertisements. I would like to read more printing matter on some particular mineral in order to better acquaint myself with the mineral world.

Richard W. Callison
Chariton, Iowa

June 26, 1952.

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**Best Advertising Medium!**

Editor R&M:

Because of increased business and our confidence in future advertising in ROCKS AND MINERALS, we have found that this magazine has proved to be our best advertising medium.

Lloyd W. Harazim
Seattle, Wash.

June 26, 1952.

# ROCKY MOUNTAIN COVENTION AT CANON CITY, COLO.

By PETER ZODAC, Editor

A convention which will be long remembered with pleasant memories was held June 26-29, 1952, at Canon City, Colo., by the Rocky Mountain Federation of Mineral Societies and the American Federation of Mineral Societies, held jointly. Not only was the weather good, the attendance large, and the exhibits outstanding for the excellence of material displayed, but the friendliness and cordiality of all present indicated that the convention was a grand success. Fortunate indeed were all those who attended, and among the thousands of visitors were collectors from almost every state in the union. An item in one of the local papers stated it was the largest group ever assembled in Fremont County (Canon City is its County Seat). In addition to the mineral show, there were field trips, sight seeing tours, and local excursions. Hotel accommodations were excellent, good restaurants, a nice business district, while Canon City itself was a most delightful town situated 5,344 ft. up among the lofty Rockies.

It was 5:15 P.M. when I arrived in Canon City on Wed. June 25th, accompanied by my cousin, Royce E. Phillips of Washington, D. C. I had left Peekskill, N. Y., by train for Washington, Fri. June 20th and the following morning we headed for Denver in Royce's car, stopping in Winfield, Kansas, to pick up his mother and leaving her in Denver with her daughter (Royce's sister Maravene). The drive south from Denver was a most delightful one and we were both charmed by Canon City — it was such a nice, clean and beautiful town. Our reservations had been made at Hotel Canon (we had room 212) and we just made ourselves at home, it seemed so easy. After our evening meal, taken at the little restaurant across from the hotel, we toured the city afoot. We walked up one side of the business section and then down the other examining and often admiring the displays in the store windows. Soon we noticed and on checking found that every establishment had on a window the following inscription WELCOME MINERAL SOCIETIES (a large crystal and a mineral pick were shown on its right). They had been stenciled in brown and made an attractive appearance.

The convention opened the following day, Thurs. June 26th, and we took our time getting down to it, which was held in the high school at the eastern end of the town. The admission charge was 60¢ per person and as I wanted to examine the many displays in peace and comfort, I did not reveal my identity but kept in the background more or less, hoping no one would spot me. Royce is not a mineral collector so no one knew him although at least two were present who were from Washington. We toured one display after another for about 2 hours or more, having a wonderful time in examining the minerals and then it happened — Paul O. Drury of Las Vegas, Nev., spotted me. But I was not too upset because Mr. and Mrs. Drury are two of the nicest people you ever want to meet. Mr. Drury is an active mineral collector and cutter and always has some interesting mineralogical information to pass out so — I was delighted in seeing him again and in meeting Mrs. Drury a few minutes later. Mr. Drury took me in tow and began introducing me to one collector after another, among these were two old friends whom I met for the first time — Arthur L. Flagg of Phoenix, Ariz., and Prof. J. J. Hayes of Salt Lake City, Utah. As the saying goes, "A good time was had by all" and I made the most of it.

There were two classes of exhibits — individual members whose displays filled up a number of rooms on the first floor, and dealers displays which filled up the huge gymnasuim and overflowing into the adjacent halls.

The following day, Fri. June 27th, I made a tour among the dealers, with an Editor's emblem on my chest. When the dealers saw who I was, their reception was most cordial and friendly and I was delighted to interview them. Their exhibits were very good and one could

hardly get to some of them, due to the large number of collectors examining and purchasing specimens. Among the dealers having displays at the Convention were (listed alphabetically):

**B & H Gem Shop**
(2005 N. Big Horn St., Midland, Texas)

This shop is owned by Bess and Harry Simpson who have been rockhounds for 4 years. It specializes in Texas topaz, purple agate (mostly from old Mexico), and New Mexican carnelian. A nice assortment of these and other fine minerals was on display.

**Bennett, LeRoy**
(Redlands, Grand Junction, Colo.)

Mr. Bennett has been a rockhound for 1½ years and specializes in silver work and cabochons. At the convention he teamed up with Dale Hicks of his city.

**Bergsten, L. J.**
(3041 Delaware St., Oakland, Calif.)

Mr. Bergsten has been a dealer for 3 years and specializes in jade. At the convention his display was all jade — black, various shades of green, etc. He told me of a large greenish mass of jade which was found last fall in the Crooks Mt. area of Fremont Co., Wyo. — this weighed 272 lbs. and so resembled in appearance a green frog that it was named "Green Frog." This mass has been all cut up but one piece of it, 9½ lbs., looks like a green jade mountain and is being kept as a specimen.

**Beymer, Floyd**
(527 E. 8th, The Dalles, Ore.)

Mr. Beymer has been a rockhound for 20 years and a dealer 10 years. He specializes in Montana agate, rough material as he does no cutting but he does collect them. He had a large display of this famous gem material.

**Bitner (Fred)**
P.O. Box 1025, Scottsdale, Ariz.)

Mr. Bitner has been a dealer for 12 years and specializes in unusual things—things the average dealer does not carry. He manufactures templates and fast mounts. He had some nice cut stones, cabochons and rough gem material on display.

**Brown, W. E.**
(Redwood City, Calif.)

Mr. Brown, whose trade name is "Old Prospector," has been a dealer for 3 years. He features fine cutting material, mostly from Oregon and other portions of the West. One of his displays was a nice assortment of some interesting California marcasite plume agate — entirely new find and makes excellent cabochons of which some were on display.

**Case, J. D.**
(P.O. Box 1004, Ogden, Utah)

Mr. Case has been a rockhound for 3 years and specializes in anything that is a little out of the ordinary. He had some nice gem material from Green River area of Utah.

**Collectors Shop**
(855 Casa Grande Rd., Tucson, Ariz.)

This shop established 5 years, is conducted by Mr. M. J. Elsing and daughter, Miss Mary; Mr. Elsing is a retired mining engineer. This shop specializes mostly in colorful Arizona minerals, especially copper minerals of which a large number were on display. The specimens are chiefly from old collections among which are many minerals that came out of the copper mines at Bisbee, Ariz., over 40 years ago.

**Dametz, Dr. M. G.**
(Littleton, Colo.)

Dr. Dametz has been a rockhound 12 years and specializes in Colorado palm wood. Petrified palm wood is found in the Littleton district and some of it is scenic — some slabs on display depicted cows, ducks, duck hunting, mountain scenes — very, very beautiful. He also had on display some beautiful cabochons of very nice dark blue labradorite from Albany County, Wyoming.

Royce has an Aunt, Mrs. V. Howard, who lives in Littleton, and on whom we called on the way down, after leaving Denver. I happened to mention the Howards to Dr. Dametz and to my pleasant surprise he not only knew them but told me he had married them — and thus I learned that Dr. Dametz was a minister.

This mineral establishment, owned by

**Eckert Mineral Research**
(Florence, Colo.)

Dr. H. W. Eckert (President of the Rocky Mountain Federation of Mineral Societies) had the largest display at the convention. It featured a large line of mineral specimens and mineralogical books — all nicely displayed. In another room, it featured a large and very fine display of fluorescent minerals.

**Elliott & Noble**
(Clovis, N. Mex.)

These are two rockhounds (W. E. Elliott, 115 E. 4th, and Clyde Noble, Box 62) who displayed some very nice mineral specimens and gem material. Their agate slabs were especially beautiful.

**Fischer, Mrs. R.**
(Box 555, Grand Junction, Colo.)

Mrs. Fischer has been a rockhound and dealer for the past 10 years. She specializes in agate, dinosaur bones, and uranium minerals. To my sincere regret I was not able to meet Mrs. Fischer personally (she had not yet arrived) — she has been a subscriber for ROCKS AND MINERALS for a number of years and I have still to meet her.

**Gem Cutters Supply**
(900 Keo Way, Des Moines, Iowa)

This concern has been established one year and it specializes in gem cutting material and lapidary equipment, also geodes from the Keokuk, Iowa, area. It had many Iowa and Missouri gem minerals on display.

**Gem Schools**
(1018 Vermont Ave., Washington 5, D. C.)

These schools are conducted by Neal H. Guffey who had a swap table at the convention. He had a large amount of Rose River, Va., epidote and unakite, williamsite from the line pits chrome mine, located on the Pennsylvania-Maryland line — all was good gem material. Unakite and williamsite are two of the East's most popular gem materials.

**Hayward, C. W.**
(7075 W. 32nd, Denver, Colo.)

Mr. Hayward has been a collector and dealer for 5 years and specializes in crystals. He had some nice amazonstone, smoky quartz xls and fremontite (flesh-colored feldspar found in Fremont County, Colo.), and other nice minerals on display.

**Heike, R.**
(Wenona, Ill.)

Mr. Heike has been a dealer since 1918 and specializes in Illinois geodes and trilobites, Minnesota pipestone, Texas geodes and Mississippi marcasite.

**Hicks, Dale**
(Palisades, Grand Junction, Colo.)

Mr. Hicks has been a collector, for 1½ years and specializes in jade. At the convention he teamed up with LeRoy Bennett of his city.

**House of Crystals**
(2206 Central Ave., Hot Springs National Park, Arkansas)

Nell Buhlis is the manager of this very fine establishment which specializes in Arkansas rock crystals and crystal jewelry and a mighty nice display of these products was available for all to see. We never saw so much fine rock crystal on display before! And it was all very good stuff! A very fine group of Arkansas crystals was given me as a memento of the big convention.

**Kehoe, James J.**
(Big Fork, Mont.)

Mr. Kehoe has been a dealer for 20 years and specializes in agate and jade mountings. Though jewelry is his main business, he does a lot of prospecting for gem minerals and is always in the market for good gem material.

**Leighton, Robert**
(Two Grey Hill, Tohatchi, N. Mex.)

Mr. Leighton has been a dealer for the past 6 years and specializes in Indian turquoise and Indian Petrified wood jewelry. In his home town he conducts an Indian Trading Post.

**Leiper, Hugh**
(1700 Rabb Road, Austin 4, Texas)

Mr. Leiper is a rockhound who specializes in Texas topaz of which many very fine cut stones (large and small) were on display; also rough rounded pebble. Some blue tipped celestite from Austin, Texas, were also on display.

**Mahlum, Jim**
(1555 Lake Street, Ogden, Utah)

Mr. Mahlum has been a dealer 6 years and specializes in anything unusual. He had on display some beautiful carnelian wood from Green River area of Utah.

**Martin, Earl W.**
(1884 Miller Ave., Ann Arbor, Mich)
Mr. Martin has been a dealer for 7 years and specializes in the general line of minerals. He is also a manufacturer of Martin's 2-in-1 diamond saw.

**Michael, E. E.**
(1417 Oregon Ave., Prescott, Ariz.)
Mr. Michael has been a dealer for 3 years and his specialty is minerals in general, mostly Arizona material.

**Miller, Cy**
(Box 323, Kansas City, Mo.)
Mr. Miller has been a dealer for 12 years, specializing in minerals of the Tri-State district but he has a nice stock of the general line of minerals, including cutting material.

**Montana Assay Office**
(610 S.W. 2nd Ave., Portland, Ore.)
This is an old firm, its present management dating back to 1933, which specializes in mountings without stones and jewelry hand tools and jewelry findings. It wholesales mountings to dealers. Small attractive key rings were given away as souvenirs by this company. I got a nice green one.

**Moore, Eldon**
(South English, Iowa)
Mr. Moore has been a dealer since 1934, specializing in cut stones, mostly Montana moss agate. Some of his cut stones on display were very, very beautiful.

**New England Diamond Corp**
(43 W. 47th St., New York 19, N. Y.)
The display of this firm was in charge of two local girls. The material shown was mostly cut stones — very nice and attractively displayed.

**Nininger, Dr. H. H.**
(P.O. Box 1171, Winslow, Ariz.)
Dr. Nininger has spent 29 years in research work on Meteorites and is in charge of the American Meteorite Museum at Winslow, Ariz., which was established 6 years ago. Dr. and Mrs. Nininger are the world's most successful meteorite hunters. He has meteorites for sale — lots of them.

**Oliver, George**
(Box 181, Florence, Colo.)
Mr. Oliver, who has been a rockhound for 50 years, has hunting fossils as his hobby. He had on display a large collection of dinosaur bones — heads, feet and legs—which he had collected in Colorado, New Mexico, and Wyoming. Some of his material had been slabbed and polished, but all was most interesting.

**Pascoe, Leroy**
(1414 W. Glenoakes, Glendale, Calif.)
Mr. Pascoe, who has been a dealer for a number of years, had on display a general line of minerals and slabs but all were nice material.

**Petrified Wood Products Co.**
(Kingman, Ariz.)
This firm, which has been in business 10 years, is owned by Mr. and Mrs. Carroll Farley. It specializes in petrified wood, chiefly from Arizona. Beautiful slabs of chrysocolla, shattuckite and honey onyx were on display.

**Rankin Rock Shop**
(Midland, Texas)
Mr. Porter Rankin is the proprietor and he has been a dealer for 6 years. He had on display Texas topaz (nice rough crystals, also cut stones), Mexico agate, and some nice amethyst from an old gold mine near Mexico City, Mexico.

**Roberts, Bill**
(Rise Bldg., Rapid City, S. D.)
Bill is one of ROCKS AND MINERALS warmest friends and he had on display some wonderful amber-brown barite crystals on a dark gray calcite which came from Elk Creek, Meade, Co., S. D. As this was our first meeting, it was ordained that I had to have a sample of the very fine barite specimens. It was Mrs. Roberts who presented the barite and she was so young and pretty that I became flustered — whom was I to admire? Mrs. Roberts or the barite specimen?

**Roots, Robert**
(3147 W. 39th Ave., Denver 11, Colo.)
Mr. Roots is an old friend of ROCKS AND MINERALS having been a subscriber for many years and a frequent contributor. This was our first meeting and as a memento of the event, I just had to have one of the many fine pyrite crystals that he had on display.

Mr. Roots has been a dealer for 6 years specializing in popular minerals. For his private collection he specializes in silver minerals.

**Sabin, V.**
(723 Steves Ave., San Antonio 10, Texas)
Mr. Sabin has been a rockhound for 15 years and he had on display some very interesting Texas cycad material, Rio Grande agates and fluorescent minerals. As far as is known, it is the first cycad to be found in Texas, Mr. Sabin informed me.

**Sanders Gem Mart**
(Highway 80, 5 miles south of Mesila Park, New Mexico)
This shop is run by Mrs. Mildred Sanders, who has been a dealer 4 years. She specializes in Mexican minerals and gem stones — many nice rose garnets from Xalostoc, Morelos, Mexico, which she, herself, collected were on display. She had also many nice Nevada turquoise cabochons.

**Shelden's Minerals**
(307-14th, Denver 2, Colo.)
Mr. S. R. Shelden was never around but his display was in charge of a young man who could give me no information on the establishment. I did see some interesting radio-active ore collections (20 in a box), also Geiger Counters and Mineralights.

**Skidmore, Edwin**
(Mountainside, Westfield, N. J.)
While sitting in the hotel lobby, the night before the convention opened, I happened to overhear a collector say something very favorable about Skidmore and his fluorescent lamp so I knew Edwin was in the neighborhood (he was staying at a motel). Sure enough I ran into him, also met Mrs. Skidmore and for the first time their very young son. Edwin, who has been a collector since 1939, specializes in fluorescent cabochons and fluorescent spheres — all quite large and practically knock your eyes out when under HIS fluorescent lamp. His material is chiefly all from New Jersey and it looks very beautiful even in ordinary light.

Edwin got us our first subscription at the convention, from a rockhound friend of his from Idaho, whom we bumped into in the cafeteria in the high school.

**Stewart's Gem Shop**
(2620 Idaho St., Boise, Idaho)
This shop has been established 3 years and specializes in slabbed gem material, and morrisonite (picture jasper found within 100 miles of Boise) that comes from the Morrison Ranch,also Idaho star garnets.

**Swap Table**
In charge of Mrs. Lois K. Heister, 809½ W. Silver, Albuquerque, N. Mex. This table was set up so rockhounds could swap minerals and it seemed to be well patronized.

**Van Horne, Howard**
(109 W. 6th St., Tempe, Ariz.)
Mr. Van Horne has been a rockhound for 20 years and specializes in Indian jewelry, thundereggs, and geodes.

**Viets Agate Shop**
(Rt. 7, Box 33, San Antonio, Texas)
Mr. Viets is a rockhound but may branch out as a dealer. He specializes in petrified wood. At the convention he had a general line of minerals, including rough and slabbed gem material — all from Texas — such as nice floral and bouquet agate from West Texas. Nice petrified wood (palm wood) comes from Three Rivers, Live Oak Co., Texas, he told me.

**Willems, Dr. J. D.**
(20 N. Wacker Drive, Chicago 6, Ill.)
Dr. Willems, one of the best known amateur gem cutters of the country, met me most cordially and insisted that we have our picture taken together — by Mrs. Willems. Dr. Willems has been a dealer for 2 years but limits himself to gem materials and especially faceting materials except diamonds. He is also specializing in a library of rare books, in all languages, on gems — some duplicates, one printed in 1644, were on sale at the convention.

Dr. Willems is one of a group of 5 who publish the EARTH SCIENCE DIGEST (he is a member of the Editorial Staff). This magazine ceased publication in January, 1951, when its former Editor, Jerome Eisenberg, was called into the services of the U. S. Army.

The first copy of the new revised issue (July, 1952) is a most attractive and interesting issue of 48 pages: It will be published bi-monthly by the Earth Science Publishing Co., Inc., Box 1357, Chicago 90, Ill.—$2.00 per year. (Foreign $2.50).

**Wrightway Gemcrafters**
(P.O. Box 4, Hauser, Ore.)

Mr. L. J. Wright, the proprietor, has been a dealer 3 years and specializes in Oregon agate and top quality of other gem material. His display of very fine gem minerals was much admired.

**Young, Mrs. Stanley**
(733 E. Columbia, Colorado Springs, Colo.)

Mrs. Young has a unique hobby which she has been following for 2½ years — making pictures out of crushed colored minerals. There were a number of these pictures on display, which averaged 15 x-30 inches, and they depicted desert, mountain, and river scenes, also animal and human forms — all very beautiful.

She uses colored minerals, powdered, which are sprinkled (using a spoon) on a wet varnished surface to make most beautiful and attractive pictures. Some of the minerals she uses and their colors are: azurite (blue), calcite (white), cinnabar (red), malachite (green), manganese (black), orpiment (yellow), sulphur (yellow), and other that give varied hues.

Four pictures had been painted with fluorescent minerals which reacted nicely under the ultra-violet light.

All pictures were for sale.

## INDIVIDUAL MEMBERS EXHIBITS

**Arkansas Mineral Society**
(Richard Buhlis, Sec., 2206 Central Ave., Hot Springs National Park, Ark.)

The display consisted of 8 cases of Arkansas minerals. One most interesting specimen consisted of a nice colorless diamond embedded in blue ground, from the famous diamond mines near Murfreesboro, Ark.

**Bass, Charles & Mabel**
(Jay Em, Wyo.)

One case of very nice petrified wood.

**Colorado Mineral Society**
(Denver, Colo.)

Two cases of miscellaneous minerals, which embraced crystals and cabochons.

**Columbine Gem and Mineral Society**
(Salida, Colo.)

This was an interesting exhibit — 76 gemstones and minerals and all from Chaffee Co., Colo., of which Salida is the county seat.

**Drury, Paul**
(P.O. Box 1028, Las Vegas, Nev.)

One case of beautiful gold specimens — all xled and pure; also a small exhibit of the gold family — native gold, sylvanite, calaverite, nagyagite, petzite, and krennerite.

**El Paso Mineral and Gem Society**
(El Paso, Texas)

Four cases of miscellaneous minerals, spheres, cabochons, etc. In one case was a large map of Texas completely outlined by a double row of Texas cabochons.

**Flagg, Arthur L.**
(Box 2345, Phoenix, Ariz.)

The following minerals were exhibited by Mr. Flagg: 1 case — native gold in matrix from South Africa. 1 case — micro-mounts (old and modern). 1 case — cave pearls.

The minerals were displayed in 3 Arizona-type knock-down cases which can be assembled in 20 minutes.

**Golden Spike Gem and Mineral Society**
(Ogden, Utah)

Cabochons and polished masses of carnelian wood — very beautiful.

**Jesse Myers**
(Pueblo, Colo.)

Three cases of xled minerals — very nice.

**Rio Grande Rock Club**
(Monte Vista, Colo.)

Three cases of cabochons and polished minerals from San Luis Valley, Colo.

**San Diego Lapidary Society**
(San Diego, Calif.)

A nice display of beautiful cut stones, slabs, jewelry set with nice cabochons, carved figures, etc.

**Straight, H. R.**
(1306 Main St., Adel, Iowa)

A large case of polished slabs, carved rose quartz figure, and petrified wood — all very nice.

**VanDeventer, Earl M.**
(Rt. 6, Caldwell, Idaho)

One case of large spheres (very beautiful) and one case of silver ore from Silver City Mining Camp, Idaho.

**Wilklow, Mrs. Mary E.**
(Denver, Colo.)

A case of Colorado minerals, including a beautiful plume agate in mount ("picture window").

She designed the official emblem of the American Federation of Mineral Societies.

**Acknowledgments**

I wish to take this opportunity to thank all the dealers and collectors visited for their friendly reception and cooperation. It was a very enjoyable visit and I am deeply grateful. I only hope no dealer or collector was overlooked as it was quite a problem to canvass the large group during the crowded day. (I left Canon City early the next morning.)

To Mrs. Effie M. Gunn, of Canon City, I am especially indebted. It was she who came to my assistance when I had difficulty in determining the ownership of many individual displays as labels were missing. She later sent me some notes which appear below.

To Prof. F. C. Kessler, of Canon City, the whole convention is deeply indebted. As Secretary-Treasurer of the Rocky Mountain Federation of Mineral Societies, Prof. Kessler had the heavy responsibility of putting over the convention. During my tour of the dealers, I was stopped every now and then by some one who had warm praise for Prof. Kessler. "I don't know how he did it, but he did it," said one. Perhaps the best praise came from one of his friends in a letter which reads as follows:

"You will find enclosed a sample of one of the bulletins which Prof. F. C. Kessler put out each month. The ads in this bulletin were the chief source of revenue to help pay for the work of getting the convention ready. Prof. Kessler did not solicit any contributions but he did sell the local merchants advertising space in the bulletin. He also sold dealers space at the convention and this, with the $500 which the Federation received at Phoenix last year toward the expense of the convention, was all the income they had. It has been a terrific undertaking and Prof. Kessler has carried the whole load on his own shoulders and has had to fight every step of the way. He succeeded, in spite of everything, in making our 1952 convention a howling success. I hope you will give him full credit when you write your article. He is a wonderful person and an indefatigable worker, and if the convention was a success the credit should rest entirely with him. He has been working for the good of Canon City ever since he came here in 1925."

## ITEMS OF INTEREST FROM THE MINERAL CONVENTION

By EFFIE M. GUNN
1012 Main Street, Canon City, Colorado

From Ajo, Arizona, were entered eleven exhibits all from one school district, ten of which won prize ribbons. Organized in 1947 by Mrs. Orson Stokes, their assistant principal, the Ajo Rockhounds now number about sixty-five members. The youngsters are eligible for membership when they reach the fifth grade, and from that time on, they mow lawns, run errands, and do everything else they can think of to raise money for the purchase of mineral specimens to add to the club collection. One enterprising young man even put up a "PARKING—15¢" sign when the circus came to town, and cleared better than $3.00 for his club. In 1947 the Phelps Dodge Company, operators of the New Cornelia Copper Mine and several other mines, created the Phelps Dodge trophy to be awarded at the state fair for cabinet specimens. The Ajo Rockhounds have taken this trophy two years in succession, and if they win it again this year they must drop out of the race for two years. The rules forbid the entering of any previously entered material, so the youngsters are continually trying to add to and improve their collection. The school board has provided a showcase which is kept in Mrs. Stokes' office, and the club exhibits twice yearly at the school. Mr. A. L. Flagg of the Mineralogical Society of Arizona has shared honors with Mr. and Mrs. Stokes as the guiding light of the club, and every time they hold an exhibit he makes the long drive from Phoenix to talk to them, show them slides, and encourages them in every way possible. If the example of Mr. Flagg and Mr. and Mrs. Stokes were followed in every com-

munity in the United States, there would be very little cause for any worry about juvenile delinquency. Hats off to the Ajo Rockhounds and their leaders.

Mr. and Mrs. Gibson of Fresno, California, brought 437 cut stones with them, all cut by Mr. Gibson. Many of these were the very beautiful plume agate, with a picture of an old-fashioned garden in every stone. Just as beautiful were the Australian opals, some of which were carved by Mr. Gibson into cameos and flowers. When last seen, Mr. Gibson was trying to trade some of his exquisite work for a group of unusually-formed quartz crystals owned by a local lady. We never did hear how he made out, but it's a safe bet the local lady lost nothing by the deal.

The Dona Ana Rockhounds Club of Las Cruces New Mexico, had several beautiful displays, including 41 figures carved in Japan from various minerals sent by the club. Most of these are animal figures, and the workmanship is superb, as it also is on the rose quartz figure shown by H. R. Straight of Adel, Iowa.

Mr. and Mrs. Brookerson of the Las Cruces group had several cases of cabochons, jewelry, and polished agate slabs, including a lamp, the shade of which contained 42 slabs of iris agate. These slabs sometimes have inclusions which form strange and beautiful designs, and one such slab in Mrs. Brookerson's lamp showed the figure of a Spanish dancer with a long swirling skirt and a red scarf whirling about her head.

Mr. and Mrs. Roberson of Seattle, Washington, brought their collection of silverware and jewelry, the settings of which are all original designs by Mrs. Roberson. When she sees a design in a stone, she tries to carry out the design in the setting. Thus, when she found a green stone which resembled sea foam, she immediately designed a setting in which the silver swirls up like sea foam and back toward the foam of green in the stone. She also has a very distinctive colonial set, with a gentleman and his lady. Another beautiful pin designed by Mrs. Roberson is a scenic agate stone suggesting a mountain peak, set in a silver enclosure of fir trees. This one she calls Mt. Rainier.

From Saratoga, Wyoming, came Ralph Platt and his pretty wife with their two young sons. Mr. Platt told of a vast wilderness area in Wyoming where one can find huge petrified trees still standing, much as a chimney still stands after a house has burned down. This area is located east of Yellowstone Park, and is one of the largest and most isolated petrified forests known to man. Mr. Platt drove a jeep as close as possible to the area and still had to walk at least five miles to get to the petrified trees. He brought to the convention two large sections of hollow logs, lined with beautiful crystals. Also in his display were a large slice of an agatized log, and a group of fossilized fir tree cones and seeds. In addition he showed a very good assortment of mineral cabinet specimens, including several prize winners from previous shows. One piece of covellite and bornite weighing 35 pounds was taken from the Ferris Haggerty mine around 1900 and won first prize at the St. Louis Fair early in the century. One of Mr. Platt's many gold specimens came from the same lot out of Breckenridge from which the museum at Denver obtained its famous gold display.

Mr. and Mrs. Calvin Simmons and Calvin Jr., of Denver, Colorado, had a very interesting and unusual exhibit. Calvin Jr., made an alabaster totem pole, using crystals of twenty-five different minerals to form the features of the various faces of the totem. Mr. Simmons made a map of Colorado, outlined by 48 rock specimens, with a string running from each rock to the location in Colorado where it is found. Mrs. Simmons had perhaps the most interesting exhibit in the family, a reprinting of the bible stories describing Aaron's Breastplate and the stones of the new Jerusalem. The Breastplate stones, originally used to designate the tribes of Dan, are the source of our present-day birthstones, and many visitors to the convention found Mrs. Simmon's display of very definite interest.

Mr. Parshall of the Denver group had some very interesting indigo-blue crystals

which he and his wife grew at home from copper sulphate.

In summing up the convention displays, it is safe to say that no less than five thousand people saw the show, which consisted of the following pieces:

| | |
|---|---|
| Cabochons | 1100 |
| Faceted stones | 138 |
| Carved figures | 81 |
| Single crystals | 151 |
| Crystal groups | 172 |
| Cabinet specimens | 1180 |
| Polished slabs | 333 |
| Thumbnails | 652 |
| Silverware | 26 |
| Rings | 11 |
| Necklaces | 44 |
| Bracelets | 9 |
| Pins | 39 |
| Earrings pr. | 5 |
| Bracelet and ring sets | 11 |
| Spheres | 55 |
| Micromounts | 272 |
| Meteorites | 7 |
| Novelties (bookends, ash trays etc.) | 26 |
| Total pieces | 4,312 |

These displays were brought to the convention at the expense of the exhibitors, purely for the pleasure of sharing their beautiful treasures with others, with no thought of financial gain. The displays filled 175 display units.

## ROCK HOUNDS

You trace them by their old cars
With fenders lost or bent,
By knapsacks worn or mended,
By breath that's nearly spent.

They slip and dig and scramble
On hills, in mines, on cliffs;
With compasses and rulers
They measure strikes and dips;
An endless search for specimens
To treasure in glass cases
Or trade for other substances
That come from distant places.

By work and friendly rivalry
Each tries to get the best
And he who gives the most away
Is loved by all the rest.

Olive McHugh
1811 East Ninth, South
Salt Lake City 5, Utah

## LOOKING BACK - - - -

Twenty-Five Years Ago in ROCKS AND MINERALS
**June, 1927, Issue**

*Notes and News of Minerals of the Rarer Elements,* by O. Ivan Lee, pp. 62-64. This was the 2nd installment of Mr. Lee's very interesting department. We note to our pleasant astonishment that his address 25 years ago is the same as it is today—2684 Boulevard, Jersey City, N. J.

*Prospector's Department,* Conducted by F. F. Seagle, Jr., pp. 65-67. Mr. Seagle was very enthusiastic about conducting this department, but unfortunately it appeared in this issue only; he never submitted any more copy for it.

*Local Department,* p. 67. The 2nd installment of this department. In this issue, James F. Morton, Curator of the Paterson Museum, described some minerals occurring around Paterson, N. J. The well known calcite-sand crystals from Pine Ridge Indian Reservation of South Dakota were described by H. N. McConnell.

*The Beginner's Cabinet, A department for young collectors,* conducted by Ilsien Nathalie Gaylord, pp. 68-73. This was our most interesting department and it ran through many issues.

*The Sluice Box,* conducted by A. Riffle, p. 73. In this column appeared little bits of wisdom, nonsense, humor, etc. One item:

"Now there are two classes of mineral dealers. Those to whom we can say 'I saw your ad. in ROCKS AND MINERALS', and those to whom we ought to say 'I didn't see your ad. in ROCKS AND MINERALS'."

*Publications Recently Received,* pp. 74-75.

# MAGNIFICENT MINERAL COLLECTION FROM BOSCH FAMILY GOES TO YALE

By H. E. MILLER
Stratford, Conn.

The great mineral collection, brought together by three generations of the Bosch family, of Berlin, has recently been presented to the Peabody Museum of Natural History, of Yale University (New Haven, Conn.), by Carl Bosch, Jr. His father, Carl Bosch also by name, was the chief agent in bringing this notable collection together, which, indeed, was actually started by the grandfather of Carl Bosch, Jr. It is believed by many to be the greatest private collection thus far of record.

More attention has of late been attracted to the matter because of a display in the hall of the Peabody Museum of some of the atomic and radioactive minerals from this massive accumulation of mineral specimens from nearly every part of the world. Yet the collection has thus far been given but slight publicity, and it is doubted if five per cent of the mineral collectors of the country ever heard of it.

The Bosch family spent large sums to secure the rarest specimens known; it is a collection rich in the number of variations from type, and it fills many a gap where the already huge collection of Yale lacked specimens. With this added collection, Yale takes a place above any school in the new world for the size and variety of minerals under the roofs of the Peabody Museum. But the fact is that the building is so crowded that an immense new wing, or another structure by itself, will be required before the public will have a chance to see the entire Bosch exhibition. The museum officials already have plans for an addition to the main museum, or, if it is finally deemed best, a separate building near by will be erected, and in this wing or special structure, Yale's department of geology will also be housed.

Some idea of the Bosch collection may be gained when it is told it reached New Haven in 236 extra large cases; it required nearly all the space in three large freight cars; the total weight of the minerals was some 40 tons; the total number of minerals over 23,000. And the specimens were brought to America in an especially chartered Liberty ship. A friend of Yale donated $3,000 to cover transportation and handling charges for the huge amount of mineral cargo, which, by the way, also contains a valuable representation of meteorites, some of which are among the rarest known.

Not only are the officials of Yale proud of becoming the custodians for the almost priceless Bosch specimens, but pride is likewise taken in the fact Yale has been a leader in mineralogy of the new world for a century and a quarter or more. It was fitting, therefore, that Carl Bosch, Jr., should think first of Yale when considering on which institution to bestow this splendid gift. A noted Yale mineralogist, the late Prof. Benjamin Silliman, always so attracted by the minerals of the world, secured for his school the 12,000 piece mineral collection of Col. George Gibbs, one of the greatest such collections known in a past generation. It attracted country-wide attention; so great was the interest that excursion trains were run from New York City by the New York, New Haven and Hartford Railroad, so the throngs of people could see what was then called "a marvelous collection." It is proof that the attractiveness of a good mineral collection held a charm known to other days than our own.

Then came to Yale Prof. James Dana, a magic name in the realm of mineralogy. He was a son-in-law of Prof. Silliman; later still, Yale had Dana's son, the mineralogist, E. S. Dana. They vastly increased the fame of old Yale as a leader among the schools of the world determined to be in the forefront of a more widespread interest in geology and mineralogy. And we must never forget that massive work, the very bible for mineralogists everywhere, "A System of Mineralogy," by Dr. James Dwight Dana.

*(Continued on page 406)*

# MINERAL SHOPPER'S GUIDE

Conducted by CHARLES A. THOMAS
706 Church Street, Royersford, Pa.

Advertisers are invited to send notes or samples of their products. This service is free.

There is an oft sung American ballad which we would like to change just a little. It would be appropriate for mineral conventions. Our one track mind mentally substitutes the word Mineral for Show whenever we hear the song "There's No Business Like Show Business." Verily. There's No Business Like the Mineral Business.

Personally, we try not to get into a rut with our hobby, but we have no quarrel with those who collect just garnets, quartz (spelled with a z) only or fluorescents only or what is your exclusive phase? We know of a clay enthusiast and at least one man who is ga-ga about grindstones. The latter reminds us of the Yap Islander who had all of his fortune tied up in huge round flats with a hole in the middle. There is a great deal to learn about this old orb and the specialists are intent on taking one thing at a time.

Just how small can a particle of matter get? Real micro enthusiasts love the tiniest crystals which are, in turn, made up of molecules and on down to the finiest unit atom with its component parts. If you want to find out how much further an atom can be divided just ship one across the states insecurely wrapped and marked "fragile." The parcel-post people will do their leveling best. If your rocks are worth shipping, for gosh sakes, wrap 'em well.

The National Safety Council please note: The Mineralogical Society of Pennsylvania, under the very able guidance of Leonard Duersmith, has seriously studied the matter of Safety for Members. Mr. Duersmith has a field First Aid kit entirely adequate for any type of expedition. Hard hats, goggles and other Safety accessories are to be made available. Certain members of the Newark Society are working on a cast-iron thumb guard invention. H-mmm, that, we'd like to see.

Never again will we say that a certain mineral of a certain locality is a thing of the past. We have tried repeatedly to find a passable specimen of erythrite at the old French Creek Mine at St. Peters, Pa. Only frugal hints of this mineral have been found in recent years and usually just a smudge surrounding pyrite in calcite. However, Mr. Hayes, of the Newark Society, while on a field trip to this mine in early June, came up with a hand sized specimen of white calcite showing pink-as-birthday-cake-icing erythrite. It was not the acicular type, but nice . . . and a lovely pink.

Mr, H. Douglas Brown, of the famous Pacific Museum at Shell Beach, California, sent us a very nice greenish fluorite from the state of Washington. He asked us to compare it with Castle Dome fluorite which he also has in stock. The Washington fluorite is a prettier specimen in daylight and has a translucent quality under long wave which the Castle Dome variety does not show. Both are beautifully blue in reaction with depth of color favoring the Castle Dome specimen and a brilliant aura of light coming out of the Washington specimen. Mr. Brown has ample stock in both varieties and others. Castle Dome is in Arizona.

Does any reader know of an occurrence of Pennsylvania unakite which may compare favorably with that from Virginia? If there is such an occurrence, it has completely escaped our attention. That lovely copper bearing meta-basalt with quartz, cuprite, epidote, malachite, azurite, hematite, limonite, and what have you, which can be called aporhyolite, from near Greenstone or Fairfield, Pa. (the old Bigham Mine) may be what the collector had in mind. The Virginia unakite is just as lovely with pink feldspar in epidote and is much easier to cut and polish. According to Mrs. Rebecca Shappirio, the Washington, D. C., lapidaries are currently working up quite a bit of this fine mineral. Note the ads in ROCKS AND MINERALS Magazine for this interesting cutting material.

Mr. J. B. Carson, of Texas, whose ads have been appearing regularly in these

pages, sent us some brownish limestone and chalcedony from his area which fluoresces reddish-pink and yellow respectively. His amygdules from lava beds are interesting egg-shaped quartz. Mr. Carson is very anxious to please you. Try him for something unusual.

Mr, F. H. Johnston of Trinidad, California, sent us some greenish grey solid jasper-like material, some red jasper and true agate with brownish bands. Much of this material should find its way into cutting collectors hands. Mr. Johnston, a World War I vet, is diligently searching for good cutting material and other items so watch for his announcement in the near future.

Mr. J. F. Cornell, who is currently offering those sturdy canvas bags, has sent us a preview of N. C. minerals. His cream-white pyrophyllite and slices of crystalline pyrophyllite with large bright blue masses of lazurite, are very worthwhile N. C. specimens. Transparent spodumene in crystal form is another.

Progressive firms of the never-stand-still variety, deserve our notice. To those several owners of short and long wave U.V. lamps, who have often asked about fluorescent materials other than mineral for their art work projects will be glad to know that Ultra Violet Products, Inc,, of South Pasadena, Calif., have announced by special letter that they are offering many new fluorescent materials. We received samples of each item, We simply urge fluorescence hobbyists to write this firm immediately. Their inexpensive Blak-Ray blue tube lamp is especially recommended for the mineral and material substances. It is the same lamp mentioned in a recent issue of Collier's Magazine.

Mr. John Beal of Gastonia, N. C., has asked us the old problem 'which lamp'? The answer would require an article in itself. We recommended certain lamps in a price range of interest to Mr. Beal. From his list, we know for a certainty that his specimens will need to be reacted by a good short wave lamp such as the Mineralight SL. 2537 or they just will not be of greatest value to him. Other mineral names in his list show the need of a long wave lamp. We appreciate Mr. Beal's problem, but can see no other way out but to have both length lamps.

We should point out that minerals, unless chosen especially for the long wave, should have the benefit of a good short wave lamp, Most fluorescent displays contain the famous Franklin minerals, as does Mr. Beal's. We have a cabinet with perhaps a hundred long wave specimens or specimens which react the best under the long wave, It is lovely and spectacular, but we couldn't do without our short wave on the Franklin and other nice short wave minerals.

To Mr. J. L. of Kansas, who asked about shattuckite for cutting, we say, if you love a good blue, get it and try it. The Bradleys, of Los Angeles, who advertise regularly in these pages have this mineral by the gram along with good labradorite and Alaska mottled green jade, all currently special for this month.

If you cannot get enough reading matter on minerals why not try something others have done? Send an order to Ward's and get on their list. They send you finely printed news letters and bulletins chock full of stuff on minerals. If you repeat an order, you may be assured of being on their list for some time.

May we point out again that this department is at your service? If you cannot locate a special mineral, we hope to be able to help you. If you think you have a marketable stock of something good that should be appreciated, send us a sample, but please do not ask us to repack and reship back to you. If it is good, we will certainly advise you. If it is not too good, likewise, and we will save you many headaches later.

Mr. Sabin, when are you going to let others in on that nicely patterned brown, black and bluish grey cycad and palm and that lovely marked chalcedony? And that wood that shows the wood cells so nicely?

A long time ago we asked Milton Avery how he achieved such a gorgeous polish on his famous agate slabs. The secret can now be told. He sent us two of his flat felts with directions. Knowing him and his work as we do, we will certainly try his methods, His ads appear in these pages. We wish all other collectors

could see the fine polish Milton gets onto his agates and other fine specimens. Look for the Garden State Minerals ad.

Mrs, R. S. of Washington, D. C., is frantic for some sizeable chunks of Mexican Onyx, Death Valley variety. If you have chunks of this fine onyx, write us and state prices. Small slabs are not wanted, A small slab will suffice as a sample. We have sent the names of dealers who have listed this mineral, but we do not know for sure if they supply chunks from which certain size pieces may be cut.

We know of several localities that are small in area and too small to accommodate a large mineral club field trip. Parking, private ownership restrictions and other drawbacks, preclude mass assaults on these areas. It is our thought that those who are fortunate enough to have collected in such places, should share their finds with mineral club members through a specially noted and announced swap or gift at field trips or meetings. If it is good material, it will be appreciated. If there is enough of it, the specimens deserve special announcement. Several officials of a large eastern mineralogical society have done just this and promise to continue, Ordinary swap tables continue to be main attractions.

Melted lead or babbitt metal has been noted by observing collectors at old lead mines. Sometimes such metals are attached to rock in such a way as to appear to be a natural occurrence. If you want real native lead on rock, Hugh A. Ford has it. See his list in the March-April issue of this magazine.

Wernerite is not too plentifully marketed. You can get this, along with calcium larsenite and other Franklins from Grieger's in their Fluorescent Bonanza for a mere $2.00.

Perhaps the most important book for the lapidary, is "The Diamond Saw and its Operation," by Wilfred C. Eyles. This book is a must for old hands and beginners who use the diamond saw. It will save the user money and the $1.20 will come back many times over. This is not just another blurb.

Grenzig, Hammaneau, Hill and other mineral greats who are no longer with us are no doubt wandering arm in arm and discussing at great length, the wonders of the material world, We regret to mention the passing of two famous mineral men, Mr. Hammaneau and Mr. Hill. A great number of those still living will miss these fine men more than a little.

Mr. Vance, of South Pasadena, Calif., should have, by this time, through the use of this department, found his Valyermo apatite and that beautifully fluorescent manganous sulfate slag, both of which fluoresce in about the same brilliant yellow-orange color, The apatite and the slag require the two wave lengths. The beautiful apatite reacts only under the high intensity transformer long wave lamps in order to compare it with the colors of the manganous slag which react only under short wave. The two are remarkably the same in color reaction. The slag, however, reacts with varied hues in phosphorescence. Ultra Violet Products, Inc,, have listed both specimens and The Bradleys are known to have ample supplies of at least the slag.

Yes, Mr. L. K. of New York City . . . crystallized turquoise is a fact. Several dealers have listed this interesting type. Mrs. Gene Belz, of Quarry Garden Farm, near Lansdale, Pa., showed us a specimen some years ago.

Diamond and graphite are known to be of the same chemical-mineral composition. They are sufficiently different to deserve names of their own. Someone, a long time ago, saw fit to give a light colored hydrous aluminum phosphate a name other than turquoise. It is coeruleolactite , , . known to occur in translucent milky green white crusts thick enough for cabbing which has been done beautifully. We can tell you where to get it if you are prepared to reopen an old (Trimble) wavellite mine in East Whiteland Township, Chester County, Pa. We were born over a half century too late. We do own a specimen of it, thanks to the famous petrologist, Mr. Harold Tomlinson, of Swarthmore, Pa. If one digs deep enough, one may come up with some coeruleolactite or a Korean. We did find

some gorgeous micro wavellite and silky tufts of brilliant micro aragonite (?) in the only remaining loose boulder at this old mine. Other brilliantly clear micro crystals resembling wavellite have not been positively identified. They are shaped somewhat like a complex harmotome.

It is not too late to advise dealers to get ready for the Eastern Federation of Mineralogical Societies Convention to be held in Newark this October. Certain dealers in the far west have already reserved space and are itching to get going. Livewire dealers deserve a lot of credit, They expend much effort in our behalf. American dealers should get a rising vote of thanks wherever they go. If it were not for their zeal and know how, our hobby would be so dull and we mean so dull. The following dealers have reserved space for October 9, 10, 11, 1952, through Mr. William B. Aitken of 63 Lexington Avenue, Westwood, N. J.: New England Diamond Company; Mr. John S. Albanese; Schortmann's Minerals; Mr. Odom of Austin, Texas; A. G. Parser, Inc.; Claude Smith; Don Hurley; Wise, of Washington, D. C.; Mr. Robert Roots, of Denver and Ultra Violet Products, Inc. These are the early birds and there will be many others. Have you sent your reservations?

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**Registers Complaint!**

Editor R & M:

May I take this opportunity to register one complaint? Two months between issues seems too long to wait, not only that but my wife objects to my staying up half the night devouring the latest issue on the day it arrives!

Kenneth C. Brown
San Jose, Calif.

May 16, 1952

**A Family Member of R. & M.**

Editor R & M:

In checking back on previous editions I find that I have been a member for over 19 years and have benefited more and more as years went by. You are certainly to be more than congratulated for the wonderful work you have done and to-date find it to be the top magazine. I am proud to be a family member of yours!

Robert Lobel
Daly City, Calif.

**Many Field Trips Made!**

Editor R&M:

I read your magazine from cover to cover and enjoy every bit of it. One of these days I'll tell you about the many field trips I've made and the very fine people I've met through reading ROCKS AND MINERALS.

Rodger L. Hicks
Hammond, Ind.

June 23, 1952.

**Suggests A New Name!**

Editor R&M:

I have often read that many mineral collectors do not like the the name of "Rockhound." Why not make a name out of rocks and geology such as "Rockologist"? No copyright or patent on this name, I believe.

Harry H. Perkins
Brooklyn, N. Y.

July 10, 1952.

## OBITUARY NOTICES

It is with much sorrow that we report the passing of the following mineralogists:

**Laurence Everett Bagg**

March 11, 1881—May 19, 1952

Laurence Everett Bagg, a well known mineral dealer and prospector, died on May 19, 1952 in Phoenix, Ariz. Educated in chemistry and electrical engineering, Mr. Bagg became interested in minerals at an early age. Born in Aurora, Ill., March 11, 1881, Mr. Bagg moved west while still a young man. For the past 10 years or more, he was a dealer in minerals—his mailing address was Box 782, Peoria, Ariz.

**Samuel G. Gordon**

Samuel G. Gordon, former Assistant Curator of Minerals at the Philadelphia Academy of Sciences, collapsed and died in Cincinnati, Ohio, on May 17, 1952. He was 54 years old. We hope to print more details and possibly a story on his life in the next issue of ROCKS AND MINERALS.

**Charles R. Toothaker**

Charles R. Toothaker, Curator of the Philadelphia Commercial Museum since 1904, died on May 25, 1952. He was 79 years old. We hope to print more details and possibly a story on his life in the next issue of ROCKS AND MINERALS.

# THE AMATEUR LAPIDARY

**Conducted by COMMANDER JOHN SINKANKAS**
1107 S. Oakcrest Road, Arlington, Va.
Amateur and professional lapidaries are cordially invited to submit contributions and so make this department of interest to all.

### Gem Values of Yesteryear

I guess you have all heard that gems generally retain their values over the years. This is not always true of course, but is one of the selling points used to convince prospective purchasers who are toying with the idea of buying for investment or "rainy day" purposes (consult further Carol Channing's song "Diamonds Are A Girl's Best Friend" in the musical "Gentlemen Prefer Blondes"). In this connection it may be of interest to many readers to see what prices were being charged in Germany, circa 1912, for finished stones, wholesale.

These prices are based upon those given in Dr. A. Eppler's book: "Die Schmuck-Und-Edelsteine" which apparently was the second volume of a series of trade manuals put out under the title "Gewerbliche Materialkunde." This book was published in 1912 and represents a typical example of Teutonic thoroughness both in its format and contents. Dr. Eppler was apparently closely in touch with the gemstone trade in Idar-Oberstein and elsewhere, and the contents reflect many practices, trade secrets, processes, etc., which are generally conspicuous by their absence from similar English language publications.

The table of prices furnished below is interesting for several reasons, among them the rather astounding degree of concurrence with today's prices, and in a few cases the extreme over-or under-valuation according to present standards. In this respect note particularly the aquamarine prices (too high), turquoise (too high?), and topazes which appear too low but are most notable for the fact that the blues commanded a higher price than the yellows. At present blues are common on the market and not particularly sought after except as an unscrupulous imitation of the blue grades of aquamarine, it should be sold on its own merits, which are not a few, but that is a different story.

The prices given below have been translated from 1912 Marks into TODAY'S dollars so that readers need do no mental juggling; naturally the range of values is not complete but represents the vast majority of the articles ordinarily available in the gem markets. Certain gemstones are classified into qualities which stem from their places of origin such as the four classes of amethyst: Bahia, Uruguay, Siberian, and Auvergne (France). The prices given are not for the fact that an amethyst comes from a certain locality but for the color quality which is typical of that locality. Thus not all Siberian amethysts are top-notch by any means, and neither are they, when so-labelled, necessarily from Siberia. If for example, a Bahia amethyst should possess the rich coloring of the Siberian class, it will be labelled "Siberian" in the trade and sold as such.

**1912 Prices of Gemstones (Wholesale) in Germany**

Prices per carat unless otherwise specified

| | |
|---|---|
| AMETHYST | |
| Bahia | $ .20 - $ 1.50 |
| Uruguay | .40 - 3.00 |
| Siberian | 1.50 - 4.00 |
| Auvergne (France) | .40 - .70 |
| AQUAMARINE | |
| Colorless | $ .60 - $ 2.00 |
| Medium color | 1.00 - 6.00 |
| Dark blue | 7.00 - 21.00 |
| Finest blue | 29.00 - 36.00 |
| BERYLS | |
| Golden brown | $ 1.50 - $ 4.00 |
| Light golden green | 2.00 - 7.00 |
| Deep green (chartreuse) | 4.00 - 14.00 |
| CHRYSOBERYL | $ 3.00 - $ 11.00 |
| PERIDOT | |
| American | $ .70 - $ 4.00 |
| St. John's (Egypt) | 1.00 - 29.00 |
| Finest and largest | - 72.00 |
| CHRYSOPRASE | $ .40 - $ 3.00 |

| | |
|---|---|
| CITRINE | $ .15 - $ .70 |
| CATSEYE CHRYSOBERYL | $ 22.00 - $145.00 |
| PRECIOUS OPAL | |
| Austr., small stones | $ .40 - $ 1.50 |
| Austr., med. stones | 2.00 - 7.00 |
| Austr., large stones | 9.00 - 72.00 |
| Austr., black opals | 2.00 - 145.00 |
| FIRE OPAL | $ .25 - $ 3.50 |
| HEAT-TREATED CITRINES | |
| Brazil | $ .10 - $ 1.00 |
| Spanish | .10 - 2.00 |
| Madeira | .15 - 2.00 |
| JADEITE | $ .10 - $ 2.00 |
| NEPHRITE | $ .05 - $ .30 |
| KUNZITE | $ 3.50 - $ 22.00 |
| LAPIS LAZULI | |
| Persian | $ .30 - $ 1.50 |
| Chilean | Costs about the same as Amazonite |
| MOONSTONE | |
| White sheen | $ .25 - $ 1.00 |
| Blue sheen | .90 - 3.00 |
| RUBY, Natural | |
| Small stones | $ 2.00 - $ 15.00 |
| Larger | 22.00 - 220.00 |
| RUBY, Synthetic | .70 - 3.00 |
| SAPPHIRE, Natural | |
| Cabochone | $ .70 - $ 6.00 |
| Facetted | 2.00 - 9.00 |
| Indian, small | 2.50 - 18.00 |
| Indian, medium and large | 22.00 - 36.00 |
| Especially beautiful | 58.00 - 220.00 |
| SAPPHIRE, Synthetic | $ 2.00 - $ 7.00 |
| EMERALD | $ 2.00 - 1500.00 |
| SPINEL | $ 2.00 - $ 7.00 |
| SPODUMENE | $ 1.50 - $ 4.50 |
| TOPAZ | |
| White | $ .75 - $ 2.00 |
| Yellow | 1.50 - 15.00 |
| Blue | 2.00 - 18.00 |
| Rose | 3.00 - 36.00 |
| TURQUOISE | |
| Persian, 1 mm, per 1000 | - $ 36.00 |
| Persian, 2-4 mm. per piece | $ .40 - 1.50 |
| Persian, over 4 mm, per piece | 2.00 - 150.00(?) |
| Persian, over 6 mm, per piece | 360.00 - 450.00(??) |
| American | .10 - .75 |
| Persian Matrix, 8-12 mm, piece | 7.50 - 15.00 |
| American Matrix, 8-12 mm. per carat | .15 - 1.50 |
| TOURMALINE | |
| Ordinary | $ .75 - $ 10.00 |
| Special stones | - 22.00 |
| ZIRCON | $ .50 - $ 4.00 |
| AGATE and DYED AGATE | |
| Cabochons, ordinary, 5-10 mm, per doz. | $ 1.00 -$ 4.00 |
| Cabochons, better qual. 5-10 mm, per doz. | - 7.00 |
| Cabochons, 10-15 mm, per doz. | 4.00 - 14.00 |
| Cabochons, exquisite qual. per doz. | 7.00 - 29.00 |

AMAZONITE, prices comparable to better quality agate.

AMETHYST QUARTZ, cabochons, prices about same as better quality agate.

AVENTURINE, green about same as agate; red is about twice as much.

AZURMALACHITE, about one and a half times as dear as malachite; stones with regular patterns are substantially dearer, the price varying according to beauty.

ROCK CRYSTAL, small stones are somewhat higher in price than dyed agate; facetted stones up to 8 mm cost $2.00 — $6.00 per dozen. Spheres of 100 mm (4") cost from $1300.-$1500. a piece.

CHALCEDONY, if of a blue color, price is about twice as much as same sized agates.

HEMATITE, about twice the price of agate in the same sizes.

BLOODSTONE, costs about the same as the better qualities of dyed agate.

LABRADORITE, per gram, $.50-$10.00.

"SWISS" LAPIS (blue dyed NUNKIRCH JASPER), prices about the same as the cheaper grades of agate and chalcedony.

MALACHITE, in small pieces about the same price as hematite, in larger pieces, the price rises considerably.

SMOKY QUARTZ, small and medium sized stones (facetted) have about the same price range as medium quality Bahia amethyst. Large and beautiful pieces are rare and command collector's prices.

RHODONITE, about the same prices as amazonite.

ROSE QUARTZ, prices comparable to agate; unmatched cabochons of 5-20 mm cost $1.50-$7.00 per dozen. Unbored and unmatched beads of the same diameter cost $4.00-$8.00 a dozen.

SODALITE, refer to amazonite for prices.

TIGEREYE, about the same as amazonite.

### Lincoln in Sapphire

The National Museum in Washington, D. C., had the famous Lincoln head in Australian sapphire on display for the month of June, 1952. I took advantage of this opportunity to see for myself the somewhat controversial sculpture which is now touring the country. In my opinion, it is truly a magnificent feat both artistically and in respect to craftsmanship. The difficulties attending the engraving or sculpturing of sapphire are so enormous that the uninitiated are apt to view this work of art with a blase air, ignorant of the effort and skill that had to be exerted by the artist in the management of a hard and fractious material. The color of the bust is an extremely dark blue which at first blush appears to be black, however, a close inspection reveals readily enough its true color. Delicate touches of polish are placed on the hair to emphasize and set off the fine matte finish left to portray the skin. The subject's expression is one of calm, relaxed, dignity; contemplative, yet in repose, hinting at the enormous powers so characteristic of Lincoln in real life.

If in its wanderings, this exhibit should come your way do not hesitate to see it for yourself, you need not be a lapidary to appreciate it.

### Wood Lap for Jade

A fine piece of New Zealand nephrite came to my hand a short time ago and as is my custom, I prepared a large cab from it (43 mm). Everything proceeded well up to the final polish which was done on moist leather with chrome. Work as I would the polish still left numerous patches of frost here and there over the crown. Accordingly I took the cab and finished it up on a hard maple lap impregnated with tin oxide. This left a fine sparkly finish which glistens like agate. For minerals with a fibrous structure and those allied to the amphiboles and pyroxenes, wood seems unusually effective in producing a perfect polish. Linde "A" is a suitable alternate medium in lieu of tin oxide.

## MUSEUM COLLECTORS BACK FROM TEXAS TRIP

Two fossil collectors from Chicago Natural History Museum have returned from their 1952 expedition to Texas sure that they have something of value for the institution's collections of Cretaceous age (125 million years ago) — but they're not sure of what it is. What is more, they won't be sure until after several months of combing through the material brought back, and intensive studies in the museum laboratories.

The collectors are Chief Preparator Orville L. Gilpin and Preparator William D. Turnbull of the Division of Paleontology. What they brought back appears, so far, outwardly to be only a mass of about 1,750 pounds of "bony concentrate." The original masses of consolidated sands and other material dug up and moved while working in the field amounted to about 20 tons. In the field preliminary "washing" and sorting of these huge masses enabled the digging out of "the bone level" and separation of it from the tons of sediments. Washing this through sieves forms the concentrate brought home of microscopic fragments of bone, teeth and fish scales of tiny creatures which lived more than a hundred million years ago.

From the experience of previous expeditions over several years, further washing and sifting of this concentrate in the museum laboratories is expected to yield the remains of the fossils. Similar concentrates brought back by expeditions in 1950 and 1951 yielded more than 125 fragments of long extinct mammals, turtles, dinosaurs, crocodiles, frogs, and fishes, some of them not previously known to scientists. The collecting centered in an area in the vicinity of Forestburg in northern Texas.

# THE SAND COLLECTOR

Conducted by PETER ZODAC, Peekskill, N. Y.

Items on interesting sands wanted. Please send them in.

**Magnetite Sand from Attica, Greece**

A most interesting sand has been received from John J. Lavranos, 1, Papadiamantopoulou, Athens, Greece. It is a sparkling black coarse sand consisting chiefly of black magnetite with very small amounts of quartz (white, also brownish) and green epidote. Much of the magnetite is in small crystals, often with good sharp faces.

Part of a letter dated May 22, 1952, from Mr. Lavranos reads:

"This black sand occurs in very restricted amounts on the beach between Raffina and Marathon in Attica (the very beach on which the Persians landed before the famous battle of Marathon); 99% of the sand of this beach is yellow."

**Foraminiferal Sand from Ireland**

An interesting foraminiferal sand, grayish in color and consisting almost entirely of tiny shells (foraminifera), occurs in dunes on the shore of Dogs Bay, Connemara, County Galway, Ireland. A small sample of this sand has been donated by W. E. Howarth, National Museum of Wales, Cardiff, Wales.

**Tourmaline Sand from California**

The following item is taken from a letter dated Sept. 17, 1951, sent in by Roy Shoemaker, 1827 W. Drescher St., San Diego 11, Calif.:

"I am sending you a sample of tourmaline sand from Mesa Grande Indian Reservation, the site of the old Himalaya tourmaline mine.

"The person who collected this sand is now an old man. He does remember all the details about it. It was collected sometime between 1906 and 1910 from a creek bed a few miles below the mine.

"When I saw the sand two years ago, I made a trip into that country to find it, but the country has changed so much that if it was ever in the creek the years and floods have destroyed the pockets so there is none left. When I read in your letter that you were interested in sand, I remembered this sand, and paid the old man a visit. He had about 2 lbs. of it but did not want to let any of it go —finally I talked him into selling me an ounce."

This is a pinkish, coarse sand. It consists chiefly of slender pink tourmaline (rubellite xls)—all gemmy and showing little wear, with smoky quartz, colorless spodumene, and a few muscovite flakes. The Himalaya mine is in Mesa Grande, San Diego Co., Calif.

**Beach Sand from Kalaloch, Wash.**

Last October we received an interesting sand sample from W. R. Danner, Dept. of Geology, College of Wooster, Wooster, Ohio. The label with the sand read:

"Beach sand from the Pacific Coast near Kalaloch (Jefferson Co.), Wash. Contains pink garnet which gives it the local name of 'Ruby Sand', supposed to contain gold, platinum, magnetite, etc. Haven't examined it as yet."

This is a fine grained reddish-gray sand consisting chiefly of pinkish garnet, with green epidote, black magnetite, colorless quartz, and colorless zircon which fluoresce orange under the Mineralight. We failed to find any gold or platinum in the sample sent us.

**Zircon Sand from Byron Bay, N. S. W. Australia**

This is a fine grained gray sand consisting almost entirely of transparent colorless zircon which fluoresces orange under the short wave lamp and reddish-orange under the long wave. Some black magnetite also present. The locality is Ocean Beach, Byron Bay, N. S. W., Australia, and the sample was donated by Homer A. Davis, 524 Putnam Ave., Cambridge 39, Mass.

**Beach Sand from New Hampshire**

This is a fine grained gray sand, mostly quartz (colorless, smoky, milky, brownish) with small amounts of black magnetite. Small particles of broken glass also noted. The sample has been donated by Mr. and

Mrs. Stephen Blake, Kittery Point, Maine, and its locality is Wallis Beach, in E. Rockingham Co., N. H., which is a popular beach on the Atlantic Ocean. The label attached to the jar reads:

"This sand comes from the coolest beach on the Atlantic Coast."

**Singing Sand from Fallon, Nevada**

This is a dark gray (peppered black), medium grained sand consisting chiefly of quartz (clear, smoky, white) with black magnetite and some colorless zircon which fluoresces orange under the Mineralight. The grains are all rounded. The sand was donated by R. F. Henley, 4075 — 19th St., San Francisco 14, Calif., whose letter, dated May 19, 1952, reads as follows:

"I just returned from a 1750 mile trip over into Nevada, Death Valley, etc. About 25 miles east of Fallon, Nevada, I collected some "singing sand' from the base of an immense hill of sand, but I missed the real thrill. My companion, Louis Baer, went part way up the hill and sat down on the sand and it rumbled like a volcano. I did not climb the hill and he did not tell me about the thrill until too late. I am sending you a sample of the sand."

Another letter from Henley, dated June 11, 1952, has this interesting paragraph:

"And about the singing sand. Mr. Chesterman, geologist at the Division of Mines, tells me the rumbling is just the accumulated sound of billions of grains of sand moving against each other just as billions of tiny ocean waves make a mighty roar. If you can spare the time when you are here I shall be glad to take you there or to any other mineral location you might like to visit. The singing sands are about 345 miles from San Francisco."

The sample comes from Churchill Co., Nev., near U. S. 50, about 25 miles east of Fallon.

**Garnet Sand from Prout's Neck, Maine**

The following letter, dated April 28, 1952, comes from Philip Martin, Sebago Lake, Me. It reads:

"Under separate cover I will send you (as soon as possible) a sample of a rather interesting sand.

"This purple (?) sand occurs in small amounts on an otherwise nondescript beach at Prout's Neck, near Portland, Cumberland Co., Maine. Its origin seems to be somewhere beneath an enormous outcropping of schistose rock, and the sand appears as a rather conspicuous purple (?) stream, spilling across an otherwise white quartz sand beach.

"I sent a sample to a friend in Erie, Pa., and he suggested — as I expected — that the color might be attributed to the presence of garnet. I'm still not certain WHAT the sand contains, and would like to know what you think. At any rate, I hope it will prove interesting as a new item from a new locality.

"Why limit your SAND COLLECTOR column? Since I have started following it I have decided that I'd appreciate more, and shorter, items — and less 'patter'. I should talk. You do a fine job — keep it up.

"I hope some day to find ambition enough to go after a few more items for your S. C. column. There are several particularly interesting localities nearby, and I will try to get you some:

1. Just plain sand from Sebago Lake. The salmon like it.

2. Vari-colored sands from the Desert of Maine in Freeport, Maine.

"Many thanks for a unique and very interesting feature, the SAND COLLECTOR."

This is a reddish, medium grained sand consisting of pinkish garnet (which gives the sand its color) with colorless to white quartz, a little black magnatite, and a very little colorless zircon that fluoresces orange under the Mineralight.

**Beach Sand from Se'etaga Village, Samoa**

We have a subscriber in the Samoa Islands (Max Haleck, Pago Pago, Tutuila, Samoa) who sent us recently a number of sand samples and minerals from his Island in the Pacific Ocean. Among the sand samples is a beach sand from Se'etaga Village, on the S. W. coast of Tutuila Island. This is a beautiful dark brown medium grained sand

consisting chiefly of gemmy brownish olivine with some white to brown sea shells and black magnetite. All of the magnetite is nicely rounded, some grains are polished so that they resemble in appearance black, opaque obsidian.

**Coral Sand from New Hebrides Islands**

A few months ago we received a nice sand sample from Thomas A. Oleszkowicz, 6969 Parkwood Ave., Detroit 10, Mich. This is a cream colored, coarse sand consisting chiefly of coral (cream and white) with broken sea shells (tiny complete shells also present). The locality is Second Bay, Espiritu Santo Island, New Hebrides.

The New Hebrides Islands (in the Pacific) are jointly administered by British and French Resident Commissioners.

**Dune Sand from Indiana**

A sample of dune sand from Indiana State Dune Park (on Lake Michigan), Porter Co., Ind., has been received from Walter Reeves, R 3, Greencastle, Ind. This is a fine grained dark gray sand. It is all quartz (colorless, white, brown) except for a tiny amount of black magnetite.

**Beach Sand from Long Beach, Miss.**

To Rev. Wm. J. Frazer, 625 Main St., Moosic 7, Pa., we are indebted for a number of interesting sands which he obtained for us from friends. One of these is a beach sand from Long Beach, Harrison Co., Miss., which had been collected by Mrs. T. H. Shepard, 426 Russell Ave., Long Beach, Miss. This is a fine grained dark gray sand consisting entirely of quartz (colorless to smoky).

A letter from Mrs. Shepard, dated May 15, 1952, tells us:

"The sand came from the Mississippi Sound, about 8 or 10 miles from the Gulf of Mexico. The Sound is separated from the Gulf by a series of Islands so it is probable that this sand actually was once in the Gulf. I will be glad to get you some sand from the Gulf if you desire it."

**Lake Sand from Illinois**

Another sand sample obtained for us by Rev. Frazer comes from Lake Carlinville, Macoupin Co., Ill. This is a dark brownish, fine to coarse grained sand consisting almost entirely of quartz (brownish to smoky) with minor amounts of reddish quartz, white chert, and black magnetite. The brownish color of the sand is due to brownish clay which coats most of the quartz grains. Much of the grains are gem quality smoky quartz and often nicely rounded.

A letter dated June 6, 1952, from Rev. Frazer reads:

"A small package of sand from Lake Carlinville in the town of Carlinville, in Macoupin County, Illinois. It was brought to me by a student at Blackburn College, located in Carlinville, who is now home on vacation — Francis P. Riviello, 702 Minooka Ave., Moosic 7, Penn."

**Granite Sands from Fresno, California**

Two interesting sands have been received recently from C. A. Noren, R. 3, Box 312, Fresno, Calif. Because they consist chiefly of quartz, feldspar and mica, which commonly form granite, we are calling them granite sands. One sample is a coarse brownish sand consisting of smoky quartz, white feldspar, and silvery flakes of muscovite (mica) with some black magnetite. This comes from the 212 foot level of an irrigation well, recently drilled, 5 miles S/E of Fresno, Fresno Co., Calif.

The other sample is a coarse grained gray sand consisting of quartz (smoky, colorless), feldspar (white pinkish), muscovite (bronzy flakes), biotite (black flakes), with magnetite (black) and tourmaline (black, imbedded in quartz). This sand comes from the 93-foot depth of a domestic well drilled recently, 5 miles S/E of Fresno, Calif.

"A redwood tree was struck recently when well drilling only 2 miles from here," an item appearing on a card dated April 21, 1952, from Mr. Noren.

**River Sand from Royal Gorge, Colorado**

A medium grained dark gray sand from the Arkansas River in the famous Royal Gorge of Fremont Co., Colo. It appears to be a granite sand as it is made up

chiefly of quartz (smoky) feldspar (white, also pinkish), muscovite (silvery flakes) and magnetite (black). The sample was donated by Howard V. Hamilton, 187A Franklin Ave., Vandergrift, Pa., who collected it last year when he and Mrs. Hamilton made a trip to Utah.

**Oolitic Sand from Great Salt Lake, Utah**

This is a fine to medium grained sand, gray in color, consisting entirely of calcite concretions (all nicely rounded and gray to white in color). It was donated by Oliver A. Mason, 319—26th St., Ogden, Utah. A letter from Mr. Mason, dated Feb. 25, 1952, reads:

"I am sending you some sand from the Great Salt Lake. There was a large phosphate plant close to the lake and this sand was washed from the phosphate during recovery. Under the microscope the grains look like pearls.

"The location is on Highway 40 at the south end of the lake near the Garfield smelter (copper) and between Salt Air and Black Rock, both bathing resorts. Going west from Salt Lake City it is on your right. You cannot help but see it as it is a large white dump and only a few steps from the highway. Most tourists think it is salt, as the salt beds are along the highway and have many large piles awaiting transportation to the refinery near there. The salt piles are whiter than this sand whose dump is more of a gray.

"No rocking for some time as a 6 inch snowfall today and snow falling 10 out of 23 days so far this month and February has given us plenty."

The above locality, near Garfield smelter, is in Salt Lake County, Utah.

**Granite Sand from Idaho**

This sample has been donated by Mrs. William J. Vick, Jr., Vet. Housing #68, Grangeville, Idaho. In her letter, dated Feb. 18, 1952, she writes:

"I am sending a small bottle of sand. I picked it up from a sandy beach on the Selway River about 30 miles up the river from Kooskia, Idaho, toward Selway Falls. The exact location is at the basket crossing where a 'basket' on a cable is used to cross the river, a short distance upriver from Fenn Ranger Station."

This is a dark gray medium grained sand consisting of mica (black biotite and silvery muscovite), smoky quartz, white feldspar, with minor amounts of black magnetite. The sand appears to be residual after granite as the 3 minerals, mica, quartz and feldspar, appear to be evenly divided and are in rough (not waterworn) irregular shapes.

The locality is in the northern part of Idaho County, in the central part of the State.

**Glass Sand from Mill Creek, Pa.**

The following letter, dated April 17, 1952, comes from W. H. Hayes, 35 — 22nd St., Irvington 11, N. J. It reads:

"Under separate cover I am sending you a sample of sand that I feel will be interesting to you in your collection of this type of mineral species.

"It is quartz sand, and was collected personally in the summer of 1948 at the quarry of the Pennsylvania Glass Sand Co. at Mill Creek, Huntingdon Co., Penn. The sand is derived from a large quarry of quartz rock and upon exposure to the weather or the crushing process at the Co.'s plant it separates very easily and becomes a very pure silica sand. On the floor of the quarry the sand lies loose like that in a desert and remains white as you see it in the sample. Furthermore I was told at the office of the Company that this particular sand was used in the making if the great 200 inch mirror for the observatory at Mount Palomar, in California. This historical angle seems to me to make it doubly interesting."

This is a fine grained gray sand consisting entirely of pale smoky quartz grains.

**Beach Sand from Rhode Island**

Mrs. Henry C. Durfee, Seapowet Ave., Tiverton, R. I., sent in a nice sample of beach sand which she collected Aug. 6, 1951. This is a dark gray medium grained sand consisting chiefly of quartz (smoky, brownish, colorless), with feldspar (colorless, brownish), magnetite

(black), and garnet (pinkish). The locality is Quonochontaug Beach, on the southwestern shore of Washington Co., R. I. In addition to the sand, Mrs. Durfee sent us 5 interesting post cards in color—beachway at Quonochontaug; giant breakers on Quonochontaug; State Capitol; Mt. Hope Bridge at Portsmouth; Jamestown Bridge over West Passage, Narragansett Bay; all the sites are in Rhode Island and were mentioned in the Editor's long article, "Touring Rhode Island" which appeared in the Jan.-Feb., 1952, R & M, pp. 3-15 (this issue is all sold out).

In the Nov.-Dec., 1951, R & M, appeared an error on page 633 in which the locality for magnetite sand from Rhode Island was given as Quanchatague Beach. The correct spelling is "Quonochontaug".

**Ilmenite Sand from Kenya**

An interesting sample of ilmenite sand has been received from John S. Albanese, P. O. Box 536, Newark 1, N. J. This is a coarse grained, mottled (black, brown and red) sand consisting of ilmenite (black), quartz (brownish, colorless), garnet (red) with some samarskite (black).

The lacality is Loldaika Hills, Kenya, East Africa.

**Quartz Sand from Foxboro, Mass.**

Arnold M. Dixon, RFD 403, Chestnut St., Foxboro, Mass., has sent in a number of sand samples among which are 3 from an excavation on his property, taken at depths of 6, 8 and 12 feet. They are all medium grained gray sands consisting chiefly of quartz (colorless, smoky, brownish) with white feldspar, black magnetite and a little green epidote. In addition, the sand from the 12-foot depth contains a little rose quartz.

**Beach Sands from South Africa**

From Ernest M. Skea, Box 46, Pilgrims Rest, Transvaal, South Africa, we received a number of sands of which 2 are beach sands. One is from Port Alfred, Cape Province. It is a fine grained gray sand consisting chiefly of quartz (colorless) and fragments of sea shells (brownish and polished by the water) with minute amount of black magnetite. In Mr. Skea's letter, dated Oct. 28, 1951, he writes:

"Beach sand from Port Alfred, eastern Cape Province. This sand I gathered on a recent visit to the popular seaside resort fronting the Indian Ocean. The Kowie River, which bisects Port Alfred, is noted for its regatta."

Port Alfred, from the beauty of its river scenery, has been called the Dartmouth of South Africa, and the town is becoming increasingly popular as a holiday resort.

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The other beach sand comes from Kenton-on-Sea, Cape Province, South Africa. It is a fine grained yellow-gray sand consisting of colorless quartz and fragments of sea shells (brown, also white). It is due to the preponderance of the brown sea shells which give the sand its brownish color; the shells are nicely rounded and water polished. A letter dated October 28, 1951, from Mr. Skea reads:

"Beach sand from Kenton-on-Sea, eastern Cape Province. This sand was also gathered recently where I spent some time at my seaside property there. The Kenton-on-Sea beach which fronts the Indian Ocean stretches for 1½ miles between two beautiful sylvan rivers, Kariega and Bushman's. The bathing is safe, the fishing of the best, boating and sailing on the rivers all one can desire and a really fine and healthy climate."

**Granite Sands from Russ Siding, California**

This is a dark gray medium grained sand consisting of quartz (smoky), feldspar (white), muscovite (silvery to black), and magnetite (black). It comes from Russ Siding in Soledad Canyon (a few miles above Land, which is also in this canyon), Los Angeles Co., Calif. A nice sample of the sand was sent in by Mrs. Lera A. Hegel, 1945 Magnolia Ave., Los Angeles 7, Calif.

**Beach Sand from Santa Barbara, California**

Another sample sent in by Mrs. Lera A. Hegel of Los Angeles, Calif., is a beach sand from Santa Barbara, Santa Barbara Co., Calif. This is a fine grained gray sand which consists chiefly of quartz (colorless and brown) with a small amount of black magnetite.

**Calcareous Earth from Palestine**

A most interesting sample has been donated by W. N. Whittemore, 209 E. Islay, Santa Barbara, Calif. This is a coarse grained, brown, soft calcareous earth that appears to be residual after limestone. A letter dated April 18, 1952, from Mr. Whittemore reads:

"Don't know if the enclosed earth from Holy places in the Holy land would interest you or any of your sand collectors.

"I got it to use in my collection of gem stones of the Bible, and have more than I need and so am sending you a sample.

"The earth comes from Jerusalem and the bag is marked 'Holy Earth from Holy Places in the Holy Land.' "

A post card dated June 3, 1952, from Mr. Whittemore reads:

"Glad to say I have learned that the earth sent you was found on Mt. Zion, near King David's tomb."

**Magnetite Sand from Idaho**

G. Elmo Shoup, P. O. Box 756, Salmon Idaho, has sent R & M a sample of magnetite sand which he collected in Lemhi County, Idaho, at the Elkhorn Bar Placer Mine on the Lower Salmon River. It is a medium grained black sand consisting chiefly of black magnetite with some colorless quartz, pinkish garnet and some larger grains of grayish and reddish granite.

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## SANDS ARE MOST INTERESTING

I have been collecting sand since 1930. At the start of my collecting I thought I would be the only one in existence who would have such a hobby, however, after exhibiting the sands in several "Hobby Shows" and a "Nation Wide Broadcast" on which I talked about my sands, I contacted other collectors in near and distant lands, made friends, built my collection and helped them to build theirs.

I keep my specimens in five inch test tubes. I also make permanent microscopic slides of the sands by pasting narrow strips of heavy blotting paper along the top edge and ends of a blank slide. Than I put a small amount of sand on the slide and cover it with another slide glued to the first one, than it is ready to passe-par-tout the two slides together along the edges, mark with ink for proper identification and study with the aid of a low power microscope.

Some sands appear under the miscroscope like a beautiful casket of gems, which is actually what they are in miniature in the showings of garnets, amethyst, olivine and many other precious and semi-precious grains as well as the regular quartz and calcareous sands.

In my collection are over 1500 specimens from all over the world, including 310 foreign sands from 89 foreign countries and islands. North from Spitsbergen and Baffin Land, south from the Antarctic, east and west around the globe.

I believe my rarest samples come from the Antarctic. Dr. Ernest E. Lockhart, of Massachusetts Institute of Technology, Cambridge, Massachusetts, was a member of the Byrd Expedition of 1939 to Little America. With three companions he traveled by tractor and dog team 300 miles east from Little America to the Edsel Ford Mountains and claimed the land for the United States of America and raised the flag of the United States there the 25th day of November, 1940.

They are the only four men ever to set foot in those mountains.

Dr. Lockhart gave me two specimens of

sand which he collected from there. One small sample contains beautiful oilvine crystals and lava. The other sample is sediment from glacial milk which according to the analysis of the eminent Geologist, Professor Frederick K. Morris, of Massachusetts Institute of Technology, is the most interesting of the two. He said: "It is composed of tiny balls of clay which never could form in as cold a climate as the Antarctic is today, therefore is positive proof that it was much warmer there at one time. All these little facts add to our knowledge of the Antartic."

I have very beautiful colored sands from Australia, including the "Famous Colored Sands" from Noosa, in Queensland.

Also have sands from our New England Desert at Freeport, Maine, where they claim there are over 200 shades of sand.

Homer A. Davis
524 Putnam Ave.
Cambridge, Mass.

March 26, 1952

## ROCK VIEW POST CARDS

The Sand Collector of ROCKS AND MINERALS has received no less than 7 post cards from a subscriber in California. All post cards show sand or rock views and they were sent by Mrs. Lera A. Hegel, 1945 Magnolia Avenue, Los Angeles 7, California. One card bears this message:

"Ever try to get a collection of "Rock View" post cards from all over the world? Bet there are plenty of them!"

The Sand Collector has never tried to get together a collection of this sort but he does recall that some years ago a very good friend (now deceased) used to send him post cards showing rock views. This friend used to travel considerably over the eastern portion of the United States and whatever town he stopped at, if a card showing a rock formation could be obtained, that card would be sent him. He must have at least 50 cards from that one friend alone. Now if they could be found and grouped together with what Mrs. Hegal and other subscribers have sent, they would make quite a collection. The 7 received from Mrs. Hegal have been put into a special box and as rock view cards are run across they will be added and perhaps within a few months they will total at least 100 or more. It might be a good idea for some of our readers to make a similar collection.

### A Good Suggestion!

Editor R & M:

Mr. C. O. Gettings, of this city, tells me I should be reading your fine magazine ROCKS AND MINERALS, — Enclosed check $3.00.

Omer C. Thompson
June 14, 1952 Toledo 12, Ohio

### Looking Forward!

Editor R & M:

By all means renew my subscription for ROCKS AND MINERALS. I look forward to every issue and read them over and over again.

Especially interesting are the field trips you write about. This summer I plan to go to Ohio and shall visit some of the mineral localities written about in the July-August (1951) issue. Keep up the good work on this wonderful magazine.

Nancy Swanson
April 25, 1952 West Orange, N. J.

### Paso Robles Mineral Club

The members of the Paso Robles Mineral Club and the San Luis Obispo Gem and Mineral Club are cooperating on the Gem and Mineral display to be exhibited at the San Luis Obispo County 16th District Agricultural Fair to be held at the Fair Grounds here in Paso Robles, August 21st through 24th, 1952.

Among the displays will be Monterey Jade Carvings, Nipomo Sagenite and Plume Marcasite, Stone Canyon Jasper, Cinnabar, Fluorescent rocks, and last but not least, those rare Biconoids from the Templeton area, which are found with Agate bandings, Moss and Sagenite. These Biconoids were found to be excellent trading material at the Recent California convention at Angels Camp, Calif.

Many of the members will have material for trading, such as Jade, Sagenite, Biconoids, Jasper, Agate and Cinnabar in Jasper, etc.

Elizabeth Cousins, Sec'y
Box 172
Paso Robles, Calif.

# CLUB AND SOCIETY NOTES

**Attention Secretaries**—Please submit neat copies. Give dates and places of meetings. Check names for correct spelling.

### Mineralogical Society of Pennsylvania

The Annual meeting of the Mineralogical Society of Pennsylvania combined with a field trip was held May 4th, 1952, at the J. C. Showalter Quarry, Blue Ball, Lancaster County, Pennsylvania.

Ninety members, friends and guests attended.

Mr. Harold Evans, Chairman of the Nominating and Election Committee, reported that the present officers of the Society have been unanimously re-elected to continue in office for the coming term. Dr. Richmond E. Myers was re-elected to the Executive Committee to serve for a four year term. Other members of the Committee are: Mr. Charles A. Thomas, Royersford (three years); Dr. Richard M. Foose, Franklin & Marshall College, Lancaster, (two years); Dr. John W. Price, Franklin & Marshall College, Lancaster (1 year).

A letter of resignation from Mr. Howard Hamilton, Recording Secretary, was read and regretfully accepted. A vote of thanks was extended to Mr. Hamilton for his fine work in the past year.

The President strongly urged all members to cooperate with the newly formed Safety Committee and stated that this Committee was organized to protect the members and would not, in any way, hinder collecting.

A lively discussion on safety precautions took place with emphasis on the wearing of safety goggles and safety helmets. A suggestion was made that Walter Bancroft, our treasurer, take orders for the goggles and sell them to the members at cost. The suggestion was also advanced that those who would like safety helmets contact Ellen Pietsch.

### Committee Members

Field Trip Committee: Chairman, Otto Bauhof, Philadelphia; members: Samuel Hamilton, Philadelphia; William Hunt, Havertown and Kenneth Fisher, Havertown. Safety Committee: Chairman, Robert Ennis, Wilkes-Barre; members: Mrs. Florence Evans, Doylestown; James Hart, Bethlehem. Registration: Mrs. Harry Ranck, Lancaster. Advisor to to Junior Membership, Mr. James B. Irvine, Collegeville. Lapidary Committee: Cochairmen, Mrs. Gene Belz, Lansdale; and Mrs. Ben J. Birchall, Philadelphia. Secretary, Mr. Russell Bell, Bala Cynwyd. Keystone Newsletter, Co-Editors, Helen and Otto Bauhof, Philadelphia. Associate Editors, Edna and William Hunt, Havertown; and Mrs. Juliet Reed, Wynnewood. Publicity, Co-chairmen: Gerry and Will Shulman, Newark, New Jersey.

### Junior Meeting

The Junior members of M.S.P. met at Blue Ball Quarry, May 4th, under the guidance of James Irvine. The following officers were elected to serve for the 1952-53 term of office: Alfred Bell, 340 Kent Road, Bala Cynwyd, President; Eugent Orner, Cornwall, Vice-President; John Gerlack, 119 South Queen Street, Lancaster, Secretary. The group discussed how to collect minerals and how to learn to identify them. Specimens of the hardness scale were distributed and the scale was discussed. It was decided that the group will hold two meetings a year. All Juniors are urged to contact officers of the group for more information.

John T. Gerlack, Jr., Secretary

### Lapidary Meeting

Op April 6th the officers of the Lapidary Committee met at Secretary Bell's home to arrange a program for the group. It was decided to hold monthly meetings in conjunction with the field trips whenever possible or at some convenient place. At each meeting one of the group will discuss a gem material, its historical background, cutting techniques, location, and have samples of the gem, both rough and polished. Each speaker will be aided by members in the open discussion. Part of the schedules is as follows: May, feldspar, Walter Lawn; June, tourmaline, Ellen Pietsch; July, obsidian, Helen Bauhof; August, beryl, Harold Evans; September, jade, Russell Bell; October, topaz, Harry Kofke.

Members doing silver or metal work will bring samples of their work to the various meetings and display them. Swapping of materials is encouraged, and members are asked to bring their extras to the meetings.

Russ Bell, Secretary

### Progress and Accomplishments

John T. Gerlack, Lancaster, an M. S. P. Junior took 1st prize in the Natural History Section of the 2nd Annual Hobby Show sponsored by the Lancaster Optimist Club. His mineral display was a favorite with the visitors.

Carol A. Bertrand, Easton, won an Honorable Mention Ribbon and cash prize for her own display of Easton minerals at the East Penn Science Fair, Allentown Central Catholic High School.

Gerry Shulman's case of "Nipper Mounts" (small specimens mounted on 1" by 1" plastic bases) made quite a hit at the P.T.A. Hobby Show at the Madison Avenue School in Newark, New Jersey.

Jim Irvine, Junior Advisor, reports that out of 18 Junior members present, 13 had exhibited mineral collections in school or local Hobby Fairs, and all 13 won blue ribbons.

Three M. S. P. members who will take part in the program of the 28th Annual meeting of the Pennsylvania Academy of Science at Dickinson College, April 10-12th, are Richard Foose, who will present a paper on the "Relation of Ground Water Temperature to Movement;" F. H. Perfect will also present a paper titled, "Further Observations on the Similarities of Fluoroberyllate and Sulphate Ions," and John W. Price, "Bridging the Gap between the Amateur and the Professional in the Field of Science."

**Field Trips**

On April 26th, the members of the Mineral Society of Pennsylvania had the unusual opportunity and privilege of visiting the operations of "America's oldest Lime Manufacturers," the Corson Concrete Company Incorporated, in Plymouth Meeting, Pennsylvania. This company has the distinction of being in continuous operation by the same family for 130 years.

The stone in this area is a true Dolomite with a varied silica content and the quarries are located in the Shenendoah Limestone.

The Corson Company maintains what is probably the largest and most modern laboratory of any individual lime and limestone manufacturers under the direction of Dr. L. John Minnick, assisted by Cyril Presgrave, (members of M. S. P., who made the trip possible), and thirteen other members of the staff.

Guided by Mr. Corson, Dr. Minnick and Dr. Meyers, the group was shown through the laboratories, the plant and the quarry. The tour was detailed and instructive. Every effort was made by the company and its staff to acquaint their guests with limestone uses and products.

M. S. P. is deeply appreciative of the hospitality and interest shown them.

**Annual Meeting Combined with Field Trip**

Our Annual meeting of the M. S. P., combined with a field trip was held May 4th, at the J. C. Showalter Quarry, Blue Ball, Lancaster County, Pennsylvania. Mr. J. C. Showalter made history and earned the gratitude of the Society when he served gallons of ice cream, chocolate and white milk, cookies and pretzels to the entire group.

Marvin Brubaker whose beautiful farm is near the Blue Ball Quarry supplied a cabinet type exhibit for identification and comparison composed of superb specimens which he collected over a period of thirty years.

Specimens found were pink Dolomite crystals, small but beautiful Pyrite and iridescent Chalcopyrite crystals, purple Fluorite on pink

NOTICE
TO MINERAL COLLECTORS
You Enter This Property At Your Own Risk.
The Owner Of This Property Is Not Responsible For Any Accidents And Holds You Liable For Damage To Equipment Or Property!
Owner
Posted With Permission Of Owner By
The Mineralogical Society Of Pennsylvania
As a Service To Mineral Collectors And
To Property Owners.

(Photo by Harold Evans, Doylestown, Pa., M.S.P. Official Photographer)

**The "Magic" Sign which the Mineralogical Society of Pennsylvania is using to help open quarries and mine dumps to collectors. The operators are quite pleased to sign and post these signs and not one has turned down the Society as yet. Any Society or Club may copy and use the idea, if they wish.**

dolomite and clear and milky quartz crystals. Mr. Orner of Cornwall made the best find of the day, a specimen of pink dolomite crystals, measuring 9" by 9".

Mr. and Mrs. Sam Gordon were introduced and welcomed by their many friends. Their appearance came as a complete and pleasant surprise. Mr. Gordon will be remembered as the Dean of Pennsylvania Mineralogy.

Our guests Mr. and Mrs. Wm. J. Foster, Falls Church, Virginia, members of the District of Columbia Mineral Society had a good time. Mr. Foster is also chairman of the Minerals Section of the National Speleological Society.

Greg Dear, 16 months old son of Mr. and Mrs. J. David Dear, of Philadelphia, was the youngest collector present.

Gerry & Will Shulman, Co-Chairmen
Mineralogical Society of Penn.
Publicity Committee
113 Huntington Terrace
Newark 8, New Jersey

### Field Trip—May 25, 1952

Field trip to Stilwell's Quarry, Union Colrain, Lancaster County, Pennsylvania, May 25, 1952.

This was a joint trip with the Gem Cutters Guild of Baltimore and the Mineralogical Society of The District of Columbia. Ninety members and friends attended. Despite the omnipresent mud everyone had a good time. The swapping was excellent and everyone went home with a carload of specimens.

Minerals found at the quarry were deweylite, brucite, a noble serpentine good for cutting and polishing and a very curious combination of Magnetite and Asbestos so closely combined that a magnet could pick up the asbestos.

Our new signs made their first appearance and caused much comment. We believe that M.S.P. is the first to use this method of keeping localities open to all collectors. The sign appears on page 395.

### A MIRACLE AT BLUE BALL
**Lancaster County, Pennsylvania**

The first Sunday in May traditionally set aside by members of the Mineralogical Society of Pennsylvania for their annual meeting was a beautiful day. The cottony cumulus clouds in the azure sky and the warm, golden spring sunhsine seemed to portend an unusually good time for all. It was a setting for something different and as it turned out the ninety members and their friends who came were treated to an experience which might be called "something new under the sun."

After the business meeting we were told that Mr. J. C. Showalter, owner of the Blue Ball Quarry, where we met, had set off a fresh blast in our honor. Because our Society represented the State of Pennsylvania among mineral collectors and because he was a Pennsylvanian, Mr. Showalter said he decided to treat everyone to ice cream, milk and chocolate milk from his own dairy. The feast also included many pounds of delicious cookies and many cans of pretzels.

Mr. Showalter and his son, John, manager of the White Oak farm dairy insisted on doing the serving themselves. Innumerable gallons of ice cream, milk and chocolate milk were consumed and many came back for fifth helpings upon Mr. Showalter's insistence that he would take no food home.

This unprecedented show of hospitality astounded all of us and in shining contrast to the fact that more and more quarries in neighboring states are being closed to collectors and that we have never heard of a quarry owner going to this extreme, we go on record as saying that this is the first time in history that collectors have received such courtesy.

The club unanimously voted that Mr. Showalter should be elected to Honorary Membership for his understanding and liberality toward mineral collectors.

This was truly a miracle at Blue Ball.

Gerry and Will Shulman
113 Huntington Terrace
Newark 8, New Jersey

**Annual Meeting and Field Trip of the Mineralogical Society of Pennsylvania at the Showalter Quarry, Blue Ball, Lancaster Co., Penn.—May 4, 1952. There were 90 present at the meeting; 75 in photo.** (Photo by Harold Evans, Doylestown, Penn.)

**Mr. J. C. Showalter (2nd from right) serving President Duersmith with cookies. In photo, from right to left: Harry Ranck; Mr. J. C. Showalter (owner of the Showalter quarry); Mrs. Gene Belz; Emily Jo. Bauhof (front of Mrs. Belz); L. J. Duersmith, President of the M.S.P., Mrs. Otto Karl Bauhof, Secretary of the M.S.P.; Howard Ennis (behind Mrs. Bauhof); Mrs. Florence Evans (next to Mrs. Bauhof); Mrs. Howard Ennis (behind Mrs. Evans); Mrs. Arthur Hopkins; Mrs. Marvin Brubaker (behind Mrs. Hopkins). On truck (John Showalter, young son of Mr. J. S. Showalter and Mr. - - ? - - (manager of the Oak Farm Dairy). NOTE:—The pretzel can—Keystone Pretzels.**

### Mineralogical Society of Pennsylvania

Field Trip to Gap Nickel Mine

On Sunday, June 8, 1952, 80 members and friends of the Mineralogical Society of Pennsylvania made a visit to the world famous Gap Nickel Mine at Nickel Mine, Lancaster County, Pennsylvania. The day was warm and sunny with a slight breeze. From the reddish color of some of the members it was expected that sunburn would make the day remembered for quite some time.

The finds of the day included: chalcopyrite, hornblende, micro siderite, black tourmaline and pyrrhotite.

The Lapidary Section of the Society held a lecture meeting under the chairmanship of Mrs. Gene Belz, with Ellen Pietsch, Philadelphia, giving a very interesting talk on the cutting and polishing of tourmaline. Excellent specimens of this mineral, crystallized and cut, were on display.

The Micro-Mount Section, of the Society, under the leadership of Chairman Benj. Birchall, Philadelphia, had an ingenious arrangement for showing specimens. A microscope was attached to the side of an auto and the light source was taken from the electrical system of the car. A constant stream of members kept Mr. Birchall busy explaining the mystery of micro-mounting.

The Safety Committee, under Mrs. Florence Evans, Doylestown, and Mr. Robert Ennis, Wilkes-Barre, did a splendid job in erecting safety signs and in patrolling the deep water holes. It was noted, with satisfaction, that Mr. Ennis had added a first aid kit to his wearing apparel. He can now give aid to the injuries "on-the-spot."

The new directional signs, painted with day-light fluorescent paint, made their initial appearance and caused much comment. It was announced that those who wished could take the signs along and try them under U.V. At the close of the day, it was noted that most of the signs were removed.

The display of minerals found at Gap Nickel Mines were loaned by the North Museum of Franklin and Marshall College, Lancaster, Penn.

Mr. and Mrs. William Hunt, Havertown, will lead our next trip to St. Clair, Coal stripping, July 20th.

Terry and Will Shulman
113 Huntington Terrace
Newark 8, N. J.

### Newark Mineralogical Society April Outing

On Sunday, April 20th, members of the Newark Mineralogical Society visited the Kinkel and Baylis quarries at Bedford, N. Y., where fine specimens of rose and smoky quartz, black tourmaline, garnet, book mica, cyrtolite, bismuthinite and columbite were found.

Much of the success of this trip was due to the efforts of Ted Schoen of the New York Mineralogical Society who has long been a Bedford enthusiast and who had volunteered to serve as guide and renew our interest in this famous old location. Assisting Ted were Dr. Frederick Stenbuck of Mt. Vernon, N. Y., and Walter Bagley of Stamford, Conn.

### May Outing

The May 4th outing was proof of the old adage that a poor beginning often indicates a good ending. For the first few hours we were gremlin bait, —we started out in the rain, we had a small turnout because of weather conditions, old landmarks were obscured, and last but not least, we almost got chased out of the old Andover iron mine despite the fact that our permission for entry on that day had been granted two months before. After we proved our right to be there the gremlins gave up, the sun came out and things progressed smoothly. Magnetite, hematite, pyrite and some malachite were found, but the most interesting specimens were the xled gypsum encrustations found on some of the tunnel walls.

After lunch we drove on to McAfee, N. J., where our previously arranged permission to enter the quarry had been remembered and the caretaker was waiting to unlock the gates and give us any assistance we might wish. This is a limestone location and nice specimens of purple fluorite and red calcite were in abundance. Some apatite and tantalite were found, and Leonard Morgan, in searching for miccromount material, came across some tiny but excellent zircon xls.

### June Outing

The twenty members who journeyed to Pennsylvania on June 8th were well rewarded for travelling the distance to French Creek and for working hard after they arrived. Although sharp eyed collectors can often find good specimens on top of the dump, real treasures await those who are willing to dig beneath the surface. Both Wesley Hayes and Ray Jones were fortunate enough to find the rare and much prized erythrite, and Louis Reamer, on breaking open a chunk of byssolite, found a rare byssolite xl of good size. Pyrite, magnetite, and chalcopyrite xls were also found, some of the latter being up to three eighths of an inch across.

During the afternoon we were surprised to see Charles A. Thomas of Royersford, Pa., coming across the dump. This was a signal for everyone to stop work, swap news and display finds, for besides being editor of the Mineral Shoppers' Guide for ROCKS AND MINERALS, Mr. Thomas is an old friend to many of our members and we do not have an opportunity to see him very often.

### Regular Meetings

Our speaker for the May meeting was Dr. Frederick A. Stenbuck who described his 1951 collecting trip through the South and Southwest and who illustrated his talk with kodochrome slides and mineral specimens he had picked up on the trip. Mr. Lawrence T. Weagle, of Caldwell, N. J., addressed the Society on the subject of "Luminesence" at our June meeting.

Regular monthly meetings will be resumed on Sunday, October 5th when the annual symposium of summer collecting is held. The Newark Mineralogical Society meets the first Sunday of each month from October to June in the Science Department of the Newark Museum, Newark, N. J. Guests are always welcome.

Lucy S. DallaValle
Publicity Chairman
2 Jefferson Ave.
Maplewood, N. J.

### Eastern Federation Convention

On the 9th of October, 1952, the Eastern Federation will open its second annual convention. Three days of events attractive to mineral collectors, lapidaries, and the general public will follow. This particular convention is creating more than a little stir and its developments are being watched with interest by all those associated with the related hobbies of mineralogy and gem cutting. This is largely because advance notices indicate a program ambitious indeed for a long established federation let alone one only two years old, and because this will be the first time that a Gem and Mineral Show has been held in the Metropolitan New York-New Jersey area where participating dealers will have a potential buying public of eight million people within their reach.

Although the Eastern Federation is still in its infancy it has nearly doubled its affiliated clubs during the past year, thereby presenting emphatic proof that rock hobbyists do exist in large numbers in the East. That they are just as cordial as those in any other geographical area and just as sincere and enthusiastic will be recognized by all visitors to their convention.

**OFFICIAL PROGRAM**
EASTERN FEDERATION OF
MINERALOGICAL AND
LAPIDARY SOCIETIES
SECOND ANNUAL CONVENTION
Gem and Mineral Show
October 9 - 10 - 11
1952
Essex House Hotel
Newark, N. J.

**Thursday, October 9, 1952**

12 Noon—Convention opens in the combined Oxford, Cambridge and Windsor Rooms, Essex House Hotel.

12 Noon-11 P.M.—Registration.

12 Noon-11 P.M.—Viewing of commercial and non-commercial exhibits.

3 P.M.-4 P.M.—Lecture, "The Second Stone Age." Mr. Lelande Quick, Editor and publisher of Lapidary Journal.

8 P.M.-10 P.M.—Lecture, "Ye Complete Mineral Cabinet." Dr. Frederick H. Pough, Consulting Mineralogist.

11 P.M.—Doors close.

**Friday, October 10, 1952**

9 A.M.-11 P.M.—Registration.

9 A.M.-11 P.M—Viewing of commercial and non-commercial exhibits

9 A.M.-12 Noon—Judging of Club and Individual Members exhibits in the Oxford and Cambridge Rooms.

12 Noon-1:30 P.M.—Fellowship luncheon.

2 P.M.-3 P.M.—Lecture, "Crystal Structure and Its Effects Upon the Process of Gem-cutting." Comdr. John Sinkankas, editor of "The Amateur Lapidary," a feature of Rocks and Minerals magazine.

4 P.M.-5 P.M.—Auction sale in the Cambridge Room.

8 P.M.-9:30 P.M.—Lecture and motion pictures, "Chubb Crater." Dr. Victor B. Meen, Director, Royal Ontario Museum of Geology and Mineralogy.

11 P.M.—Doors close.

**Saturday, October 11, 1952**

9 A.M.-11 P.M.—Registration.

9 A.M.-11 P.M.—Viewing of commercial and non-commercial exhibits.

11 A.M.-12 Noon—Auction sale in the Cambridge Room.

2 P.M.-4 P.M.—Annual Meeting and Election of Officers (Club delegates only).

7 P.M.-10 P.M.—Banquet and Installation of officers in the Startlight Room.

11 P.M.—Convention and Show closed.

**Sunday, October 12, 1952**

Field trip to the Buckwheat Dump at world famous Franklin, New Jersey. Permission has been granted by the New Jersey Zinc Company for the Eastern Federation to employ a power shovel to turn and spread the huge dumps all day.

Admission to the dumps will be by Registration Badge.

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**Mineralogical Club of Hartford**

The Mineralogical Club of Hartford recently elected the following officers for the year 1952-53. President: Mrs. Leslie T. Goodrich; Vice President: Mr. Reginald L. Swann; Secretary: Miss Ruth Cowdell; Treasurer: Miss Carrie Bangs.

Gladys L. Gage
Publicity Chairman
239 Newbury St.
Hartford 6, Conn.

**Mineralogical Club of Hartford**
**Summer and Fall Outings**

Aug. 10 — Strickland-Hale Quarry, Portland, (Meet at Hale).

Aug. 23 & 24 — North Grafton, N. H. — (Meet at Grocery Store, Grafton Center at 1:00 P.M.)

Sept. 7 — Gillette, Haddam Neck

Sept. 21 — Lincoln, R. I.

Oct. 5 — Deerfield & Westfield, Mass.

Oct. 19 — Roxbury, Conn.—(Meet at Roxbury Station at 11:00 A.M.)

If you need transportation or directions or can take someone call:

George Dunbar—6-1133, Hartford, Conn.
Franklin Rockwell—3-9331, Hartford, Conn.

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**Whittier Gem and Mineral Society**

The Whittier Gem and Mineral Society will present "The Rockhounds Show" on September 6-7, Smith Memorial Hall, College and Pickering Aves, Whittier, Calif. This is to be an outstanding event and will have many new and different features. Four famous collections of Gems will be on display showing Gems The World Over. Members will display a special section on elements and a section on lapidary. The junior members will also have a display. The show will be held in a large and spacious hall and fourteen dealers will have their material and equipment on the floor. Plate lunches and refreshments will be available at reasonable prices. Ample free parking will be provided and there will be free door prizes.

Anthony H. Berkholz
Publicity Chairman
6108 N. Lorelei Ave.
Bellflower, California

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**Chattanooga Rock & Mineral Club**

The May 13th meeting was held at 7:30 in Room 108 Science Hall, University of Chattanooga, Chattanooga, Tenn. In the absence of President Gevers, Vice-President Baynard Smith presided. After the business meeting and introduction of guests, George C. Olmsted gave a talk on "Ancient Florida." He displayed maps showing the vast changes in shore line during the Tertiary, and then briefly told of the concentration of mammalian life in Florida during the Pleistocene. Several fossils of extinct animals were passed.

The field trip on May 24th was poorly attended due to heavy rain. The destination was Brown Gap on Sand Mtn., 4 miles from Trenton, Ga. Carboniferous Age fossils of cordaites leaf imprints and stem casts, as well as lepidodendron were found. We had lunch in the Baptist Church yard where we found delicious wild strawberries growing at our table.

George C. Olmsted
Corr. Sec'y
1129 James Blvd.
Signal Mountain, Tenn.

### Fort Worth Mineral Club

The Fort Worth Mineral Club held a field trip and picnic at Lake Whitney Dam Sunday, June 22nd.

Lake Whitney is one of Texas' newest dams, on the Brazos River in Hill County about 15 miles west of Hillsboro.

Twenty-one members were present, at this location the fossil Rudistid Reef outcrops, a fossil that fluoresces under the short wave and holds its fluorescence for about 11 seconds, the inside of the fossil is beautiful crystals.

Everyone had a good time in spite of the heat and a few sun-burns and went home loaded down.

Mr. Omer Oathout of Sanderson, Texas, sent the President of the club, Miss Millicent Renfro, a package of beautiful Agate which she distributed to the members, each receiving two specimens which were suitable for cutting and polishing.

Fred L. Mills
108 North Commerce St.
Fort Worth 2, Texas

### Connecticut Valley Mineral Club

President, Otto Bartels; Vice President, John Robinson; Secretary, Lyman Steele; Treasurer, Raymond Robert.

Meeting Place, Museum of Natural History, Springfield, Mass.

November 1951. Meeting was held at the Loomis School, Windsor, Conn. Mr. Howard of the school, spoke on the Miller collection of minerals which they have at the school, and its uses as a visual aid in teaching teen-age pupils. An inspection of the excellent collection was made by the club members.

December 1951. Dr. Shaub, Professor of Geology of Smith's College, gave a lecture on the Hexagonal Crystal System.

January 1952. Meeting was held in Pratt Museum, Amherst College, Dr. George Bains, Professor of Geology of Amherst College, gave a lecture on his visit to several mineral deposits in Arizona, paying particular attention to the Uranium deposits he encountered.

February 1952. Otto Bartels spoke on maps as an aid to mineral collecting. Nomination committee was appointed. New members were introduced.

March 1952. Held at Smith's College, Northampton, Mass. Dr. Robert Nichols, Professor of Geology, Tufts College, gave a lecture, accompanied by kodachrome slides, of the Moreno and Ameghino glaciers of Patagonia. After the lecture Dr. and Mrs. Shaub held open house at their home in Northampton, Mass.

April 1952. New slate of officers (as stated at first of article) was brought in and accepted by the club. Dr. Helen Stobbe, Assistant Professor of Geology, Smith's College, gave a kodachrome illustrated lecture on Chromite and associated minerals, as found near Red Lodge, Montana.

May 1952. Discussion of mineral localities to be visited during the Summer. A game of scrambled mineral names was played. Inspection of the mineral exhibits of the Springfield Museum was made. Refreshments were served by the ladies.

June 1952. First Field Trip of the season was made to South Newfane, Vt. Several fine specimens of Chrysoprase, Onyx and Garnierite were obtained.

Lyman N. Steele, Sec'y
139 City View Ave.
W. Springfield, Mass.

### Pasedena Lapidary Society

Mr. C. N. Laird of Clairmont, California, gave a very interesting talk on his beautiful collection of hand carved snuff bottles which he had collected in China.

The bottles were carved of such stones as agate, jade, slate, glass, and quartz crystals.

Many of the bottles had hand carved pictures on the outside of them. A few transparent bottles had writing on the inside of them.

Many wealthy Chinese employ men who do nothing but carve snuff bottles.

A small funnel and tooth pick were used to fill the snuff bottles.

Mrs. P. Lombard, Sec'y.
Box 1122M
Pasadena 1, Calif.

### Tucson Gem & Mineral Society

The Tucson Gem & Mineral Society had a field trip to Washington Camp Mining District, Sunday, June 1st. Many nice specimens of quartz, sphalerite and garnet were collected. The Tucson Howard Hughes Club, organized last week of May, 1952, were guests of the Tucson Society. About 26 cars were present.

On June 3rd, films "California and its Resources" and "Volcanoes in Action," were shown.

The rest of the meeting was taken up on discussion of Zinc minerals, many specimens belonging to members were shown.

Meetings are on the first and third Tuesdays of each month at the University of Arizona Library in Tucson, Room 110, at 7:30 p.m.

Pub. Chairman, David P. Record,
4400 So. Mission Road
Tucson, Ariz.

### Santa Cruz Mineral and Gem Society

The Santa Cruz Mineral and Gem Society held its election of officers Wednesday, May 14, 1952. The roster of the new officers is as follows:

Capt. Harry A. Reed, President; Jack Moore, Vice-President; Dora Anderson, Secretary and Hugh Baird, Treasurer.

Rose M. Baird
P. O. Box 8386
Santa Cruz, Calif.

### Santa Fe Gem and Mineral Club

The Santa Fe Gem and Mineral Club meets the third Tuesday in each month, at 7:45 P.M. Chamber of Commerce Building. Visitors are always welcome.

On May 20th, Mrs. Olive Bell of Albuquerque gave a most interesting talk on "Commercial Values and Uses of Minerals and Gems."

On June 15th, the Santa Fe Club had a field trip and a "chicken-in-the-rough" banquet, at the San Pedro Mine, south of Santa Fe. The Albuquerque Gem and Mineral Society, together with the Albuquerque and Santa Fe Miners' and Prospectors' Clubs, joined in the trip, with about 125 in attendance. Copper crystals, chalcopyrite, quartz crystals, garnets, and bornite were found. The party was taken through the mine in three groups, and Mr. Williams, the owner, explained the operation of diamond drills, etc.

On June 17th, the regular monthly meeting had as its guest speaker, Dr. E. R. Harrington of the Albuquerque High School Science Department. He showed slides and gave an interesting lecture on "Ghost Towns of the Western States and elsewhere."

(Miss) Ora D. Orme
Corr. Sec'y
RFD 1, Box 55
Santa Fe, New Mexico

### Lapidary & Gem Society of New York Inc.

A field trip to Bedford, New York, in May, yielded favorable results with our members bringing home rose quartz, beryl and some black tourmaline. Another field trip to the Watchung Mountains, in No. Plainfield, N. J., several members had a find of exceptional mahogany-red carnelian, to the satisfaction of all our members who since have seen the specimens on display at our society agreed to the unusual color . . . ideal find.

On July 1, 1952, the Lapidary and Gem Society of New York will have moved to more spacious, efficient quarters, which are more centrally located for the advantage of our present members and for the members of the future. At 264 West 23 Street, first floor; the society has five rooms, which will serve as a meeting room, library and secretarial room, two work-shop rooms and a utility room. Thirty per cent of our membership are at present, women. So, we cordially invite all persons interested in minerals, stones (precious, semi-precious and otherwise) to attend one of our meetings, 8 p.m., any second or fourth Monday, of each month. We are willing to assist those people who are interested, in any way we can.

### An Obituary Notice

Mr. Harvey Van Valkenberg was born in Chichester, New York, Jan. 3, 1893; died on May 4, 1952. He was a charter member of the Lapidary and Gem Society of New York. Was the Art Editor of "TRUE" magazine for many years. He did wood carving and linoleum prints, which may be seen in the Museum of Art, Fifth Ave., New York City. He also was a member of the Illustrator's Society of New York. Thirty members of this society were traveling throughout the south and southwest and Mr. Van Valkenberg was one of them. While in Washington, he became ill, and passed on quite suddenly. We all miss his friendly presence in the Lapidary and Gem Society.

(Mrs.) Mary Elizabeth Nemetz
Publicity Chairman
264 West 23rd St.
New York City, N. Y.

### Chicago Rocks and Minerals Society

Mr. William J. Bingham, dealer in lapidary equipment and supplies of St. Paul, Minn., spoke on "Lapidary Highlights" at the last meeting of the Chicago Rocks and Minerals Society. Mr. Bingham, an engineer, put his knowledge and skill into lapidary work the past twenty years.

Mr. Bingham gave a most detailed account of the four basic processes' in lapidary, sawing, grinding, smoothing and polishing demonstrated by sketches of his equipment. The few articles of jewelry he displayed were magnificent.

A wonderful two day field trip, May 3rd and 4th, under the very excellent and most able leadership of Dr. William E. Powers, professor of geology at Northwestern University, started at Lake Geneva, Wis., and ending northeast of the upper port of Lake Winnebago, Wis. Lake Geneva lies in old valley scoured deeper by the last glacial advance and blocked at the ends by glacial drift.

This trip was planned to give the participants an overview of the glacial and bedrock features between Lake Geneva and Lake Winnebago. We saw the kettle moraine which lies between the areas of the Lake Michigan glacial lobe and the Green Bay glacial lobe drumlin field; numerous eskers, kames, pitted out wash plains and other features built of melt water of former glaciers; the Cliff or Cuesta formed by the Niagara limestone formation east of Lake Winnebago and farther south where it becomes buried by glacial drift; glacial scratches and other marks on bedrock and the deposit of iron ore at Iron Ridge, Wis.

Many good brachiopods and bryozoa have been collected from the Mayville dolomite and in some place found in Maquoketa shale below the dolomite.

Holy Hill is the highest of a group of kames, where an imposing church and monastery repose. An impressive and beautiful view is seen from the church tower.

Bertha J. Alberts
Publicity Chairman
310 Washington Blvd.
Oak Park, Ill.

### Danbury Mineralogical Society

June 26, 1952: Regular meeting of the Danbury Mineralogical Society was held at the Museum, 83 Elm St. on Thursday evening, at 7:30 P.M. The President, Irene Hartwell, presiding.

Twenty members and several guests were present.

Treasurer Florence Anderson read report. Cash on hand $32.50. Members voted to accept as read.

Unfinished Business—A motion was made by Mrs. Januzzi to accept the Inscription for Helen Fredes memorial. The Inscription reads as follow: In memoriam, Helen L. Frede, charter member of Danbury Mineralogical Society, Teacher and Naturalist, Presented by members of the Society and date when given. The motion was seconded.

The President asked the Secretary to write a report on the field trip to Bedford, New York.

A unanimous vote was made to accept Mr. and Mrs. Charles Boenisch as new members. They were proposed at the last meeting. We are glad to welcome all new members.

New Business—A discussion on official membership cards and buttons. Mr. Ronald Januzzi stated that Mr. Charles Boenisch has taken care of the designing of the cards and buttons. An original official membership card and button was shown and the original is to be placed in the Museum. A motion was made by Florence Anderson that at least 30 buttons be made and the members are to pay when they receive their buttons. The motion was seconded.

The President thanked Mr. Boenisch for his work on this project.

A field trip was planned for Sunday, June 29th, to visit the Gillette Quarry at East Haddam, Conn.

A lecture on the identification of rock types in the field was given by the director, Ronald E. Januzzi.

The meeting was adjourned.

Martha Shelby, Sec'y
7 Robinson Ave.
Danbury, Conn.

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### Nutley Mineralogical Society

For the March field trip, the members of the Nutley Mineralogical Society, along with members of the Mineralogical Society of Pennsylvania and the Philadelphia Grotto of the National Speleological Society, went to Redington Cave, near the town of Redington, Pa., on March 23rd, 1952. The weather was slightly rainy, but finally the members arrived at the cave, which is situated in a limestone quarry near Redington.

The cave's steady 56 degrees seemed a welcome change to the members from the chilliness outside and there were many wonderful specimens of stalactites and stalagmites in the cave, some to be collected, but most to be admired, as they were out of reach. However, many good specimens were collected by those present.

The minerals collected were calcite and aragonite, in the many strange and beautiful forms which are found in caves. One specimen had crystallized aragonite, and others showed beautiful banding. All were fluorescent and phosphorescent under ultraviolet light.

The April field trip was to Judd's Bridge and Roxbury, Conn. The weather was the same, foggy and rainy, but the members went anyway. After a good deal of work, a kyanite deposit was located and beautiful blue crystals up to 6 inches in length were found, embedded in milky quartz. The kyanite was very blue and outstanding because of the rain which had been falling. Many excellent specimens were collected.

It was too late in the day to give the garnet deposit at Roxbury Falls more than a passing once-over, but some nice garnet and staurolite crystals were collected.

The Nutley Mineralogical Society is composed solely of high-school students. Several out-of-town interested people are members. The club take field trips to well-known mineral localities about every month and prints a newspaper for its members. Any interested people in Nutley or in surrounding towns are invited to join or go on the club field trips. Just contact the secretary for information.

Bevan French, Sec'y
98 Alexander Ave.
Nutley 10, N. J.

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### South Bay Lapidary Society Show

The South Bay Lapidary Society will hold its third annual show on Saturday and Sunday, September 20th and 21st, 1952.

This Society is noted for its interesting shows and this year the show should be bigger and better as there will be the addition of displays of a number of new members. Everything from rocks as they are picked up in the field to cut and polished stones, mineral specimens and a fluorescent display will be included. Members will be with their displays to give information on stones and the work.

Admission is free to the public. Hours are from Noon till 9 p.m. on Saturday and from 10 a.m. till 6 p.m. on Sunday.

The place is Clark Stadium in Hermosa Beach, Calif. To reach the stadium take Pier Avenue in Hermosa Beach to Valley Drive, turn south on Valley Drive along the railroad tracks two blocks to the building beside the tennis courts. Plenty of parking space.

We will be glad to welcome our old friends and hope to make many new ones.

DeWitte Hagar
Past President and
Corresponding Secretary
117 233rd Street
Manhattan Beach, Calif.

### Pacific Mineral Society

Soldier's cave in the Sequoia National Park, California, was explored recently by Loran Whitelock of 118 North Westmoreland Ave., Los Angeles, 4, Calif., and a number of his companions. He told Pacific Mineral Society all about it at their April meeting on the 18th at Premiere Cafeteria, 3716 Wilshire Blvd., Los Angeles. To make it vitally more interesting, he exhibited colored slides showing us some of the thrilling and dangerous crevasses up and down which they worked their way with ropes, iron stakes, and other such Mountain climbing equipment, but believe me, this is a hazardous and spine tingling avocation. It is no place for a fat man like me, so I shall remain at home, and view the pictures when they return.

Soldier's Cave has many interesting large rooms, as well as dangerous cracks and crevasses. Its stalactites and stalagmites resemble and rival some of those in Carlsbad Cavern, which no doubt many of you have seen. There were places where Loran and his companions had to crawl on their stomachs long distances, and times when they emerged only to find themselves hanging over a precipice dropping down into a large chamber, hundreds of feet deep, so they had to keep tied together with ropes while this process was being completed.

Packsaddle Cave over on the Kern River also furnished some beautiful slides, and thrilling scenes of our friends in action, up and down hazardous slides and crevices. We look forward to other talks and slides of future exploration trips into the bowels of the earth by our husky and agile friends.

Mrs. Allard exhibited some of her minerals, and a number of strings of her beads. It is a hobby with her to pick up strings of odd and colorful beads wherever she can find them — sometimes in Second-hand shops, Good-Will stores, and what-not. She has been fortunate in getting these for a very little, some of them as low as a quarter, others as high as a dollar, but all of them are worth much more. She got a beautiful rock crystal string for a song and dance, a string of amber beads for a quarter, and a string of satin-spar beads for less than a dollar, and we compliment her on her thrift and luck. I ought to give you a better description of her marvelous collection, but I lost my notes and have to depend on memory, and at my age that does not do justice to her fine exhibit.

Mrs. Royer and Miss Mitchell had a nice exhibit of minerals and again my notes are gone, but I do remember they told me a great many of these minerals were door-prizes when the Society was young. Doubtless there were some good mineralogists in the PAM even when the Society was in its infancy, which, of course, is not so long ago, as Mineralogy West of the Mississippi was not heard from much until about 1932 when the Southern California Society included everything in the West. MSSC was organized in that year.

John A. Quinn
Publicity Chairman
1828 North Marengo Ave.
Pasadena 6, Calif.

### Los Angeles Lapidary Society

The June meeting of the Los Angeles Lapidary Society saw the installation of the new officers for the year. James Underwood, President; James Ruddy, First Vice President; Clarence Chittenden, Second Vice President; Howard Evans, Treasurer; Lillian Gaston, Recording Secretary; and Mary Humble, Corresponding Secretary. The evening was highlighted with the showing of pictures taken during the year on different field trips.

Forty-six members turned out for the field trip to Horse Canyon over the Memorial Day week end, and all members found some very beautiful material. The "Jeepherders" went to the Nevada woodpile and also returned with all the petrified wood they wanted.

Claire Schroeder
Publicity Chairman
P. O. Box 2184
Terminal Annex
Los Angeles 54, Calif.

### Del Norte Rockhounds

On May 20, 1952, a group of rockhounds met in the Crescent City (Calif.) high school gymnasium and formed a mineral club. After much discussion the group selected Del Norte Rockhounds as their official name (named after Del Norte County of which Crescent City is the county seat).

The following officers were elected:

William C. Chandler, President; George Hughey, Vice-President; Gertrude Penn, Secretary-Treasurer (875 "L" St., Crescent City, Calif.); Mary A. Underhill, Hostess.

Those elected to the board of directors were: H. W. Gooch, Maude F. Kibbler, Lenore Sondergard, Ruby Del Ponte, Gertrude Peacock, Si Lubarsky, and E. J. Nyland.

### Mystery Quarry Prizes!

Editor R & M:

Enclosed please find check in the amount of $9.00 to cover the cost of three subscriptions for ROCKS AND MINERALS. These subscriptions have just been given by the Boston Mineral Club as prizes for execellence in a recent field trip. This trip was to a mystery quarry which turned out to be Blueberry Hill in Woburn, Mass., and the prizes were for the best specimen found, the largest number of different species found, etc. As you may guess, all the contestants were very anxious to obtain the prizes which had been announced prior to the trip.

Walter G. Chick Treas.
Boston Mineral Club
June 6, 1952 Boston, Mass.

### Lapidary Club of Washington, D. C.

The Lapidary Club of Washington, D. C., conducted a field trip to Rose River, Madison Co., Va., on May 4, 1952. A beautiful day in lovely surroundings made the trip worth while aside from the specimens of unakite, epidote, and jasper picked up by members.

The following members demonstrated their hobby specialties at the annual Arts Club of Wash., D. C., exhibition: Mrs. DuBois, silverware and silver jewelry; Mr. Edward A. Geisler, silver cariving, engraving and die casting; Mr. Neil Guffey, cabochon cutting; Mr. J. Sinkankas, facet cutting. The exhibition was held in the Arts Club house, the former residence of President Monroe.

Guest speakers for the year have been: Mr. Wise, of Baltimore, on gem collecting experiences in the Far East; Dr. Zerfoss, of NRL, on the growth of crystals; Dr. Pecora, of the U. S. G. S., on experiences in the gem producing areas of Brazil.

John Sinkankas
1107 S. Oakcrest Rd.
Arlington, Va.

### Humboldt Gem & Mineral Society

Humboldt Gem & Mineral Society met Friday, June 27, 1952, with a program of self entertainment.

Nineteen members made the trek to Angels Camp, Calif., for the California Federation of Mineralogical Societies Convention and gave talks on their impressions of the show. Everyone enjoyed the show very much. All were impressed with the novelty and informality of camping out while at the Convention.

Some of the members are making plans for the San Diego show next year.

Other members gave talks on field trips taken during the past month.

There is even a rumor that Eureka might make a bid for the Convention at some future date. The next field trip is planned for July 13; we meet at the Courthouse at 9 a.m. the members to bring a sack and food for pot luck luncheon. It was to be a secret trip destination unknown. No longer a secret.

Plans for the Humboldt County Fair at Ferndale, Calif. were made. It is hoped that all members will make an effort to have something in the display.

The finest collection of Fluorescents in Northern California owned by Mr. Porter of Pepperwood, Calif., will be on display.

E. A. Hutchinson
Box 601, Arcata, Calif.

### The Rex Youngs Mineralogy Society of Rockhounds

We meet on the first Wednesday of each month at 8 P.M. in the basement of the First Methodist Church, Torrington, Wyoming. Good programs each evening and all interested persons are cordially invited. Members of other societies are welcome guests.

Mrs. Loran L. Purtle, Corres. Sec'y.
Torrington, Wyoming

### Most Informative Magazine!

Editor R&M:

Please find enclosed $3.00 as payment for a one year's subscription. After borrowing your 2 latest issues I find ROCKS AND MINERALS to be the most informative magazine on minerals on sale. I find your "World News on Mineral Occurrences" very interesting.

Douglas Brookins
Healdsburg, Calif.

June 30, 1952.

### Best on the Market!

Editor R & M:

We recently moved to Tucson, Arizona. While visiting the famous San Xavier Mission we stopped in at the Mission Curio Mart. They had your magazine there and we bought a copy.

Since we are from New York City it was surprising that we had to come way out west to find your publication. It is the best magazine for the collector on the market. Your Mineral Shoppers Guide and World News On Mineral Occurrences are excellent columns, and only wish we had known of the publication before our trip out here. Keep up the good work.

William V. Greeley
4511 East Ninth
May 5,1952 Tucson, Arizona

### Another Plea For Fossil Department!

Editor R & M:

May we add our plea along with the others for a Paleontology Department? Every year we add a few more fossils to our rock collections but know very little about them. Many of our rock collecting pals have fossils in their collections, and we are sure they would like to know more about the subject.

Ervine D. Williams
Grace E. Williams
Calvin J. Williams
June 5, 1952 New London, N. H.

## NEW LAPIDARY SHOP FOR CANON CITY, COLO.

On Wednesday, June 25, 1952, Leon M. Gunn opened up Gunn's Lapidary and Gift Shop, at 1012 Main Street, Canon City, Colo. He will specialize in handmade jewelry, gifts and minerals (mostly western). Mr. Gunn will be assisted by his wife, Mrs. Effie M. Gunn, daughter Gail, and son Edwin — a mineralogical family. Their many friends are wishing them much success in their new establishment!

# PUBLICATIONS RECENTLY RECEIVED

### Connecticut Minerals, Their Properties and Occurrence

By Julian A. Sohon

Edited by Dr. A. N. Winchell

The State Geological and Natural History Survey of Connecticut recently published a new bulletin, Number 77, which deals with the minerals found in Connecticut. It is considered to be a rewriting and enlargement of a previous bulletin, Number 51, "Minerals of Connecticut" by Schairer, which is now out of print.

The bulletin, a fine source of information for collectors, etc., is divided into three parts. The first section—Connecticut Minerals and Their Properties—lists alphabetically, all minerals reported from the state for which a printed reference is available. Such information as important properties—hardness, streak, color, etc. —, occurrence and associations, localities where found, and origin of name is given for approximately 180 mineral species. There are over 80 additional varietal names given with descriptions under the parent-mineral. There are also a few terms mentioned which do not refer to any specific mineral. There were at least 7 minerals given—Reddingite, Canaanite, Fairfieldite, Dickinsonite, Chathamite, Fillowite, and Danburite—which were described and named as new minerals from specimens collected in Connecticut.

The second section—Mineral Localities in Connecticut—lists in alphabetical order 116 cities, towns, or villages of the state; and after each locality is a list of the minerals reported from that area. At least two districts were noted from which 80 or more minerals were indicated. Small numbers following the mineral name refer to the references in the bibliography in which the mineral has been noted.

The third unit—Bibliography of Connecticut Mineralogy — lists 305 references covering books, bulletins, and periodicals. The items are listed alphabetically by Authors, with a few cases where the author is unknown. In this instance the listing is made by title. A list of 18 selected books on Mineralogy is given at the close of the bibliography.

A very thorough index shows species, varietal names and preferred names where more than one name is used.

A list of the bulletins of the State Geological and Natural History Survey of Connecticut is included. The 133 page publication is available for $2.00 per copy and requests for the bulletin should be directed to:

James Brewster, State Librarian,
Distribution and Exchange Agent
State Library
Hartford 1, Conn.

H. Hamilton
Vandergrift, Pa.

### Fabricas Released

To persons interested in California, the Division of Mines now offers the second in a series of reports on the history of mineral discovery and development in California. "Fabricas: A collection of pictures and statements on the mineral materials used in building in California prior to 1850" is the new publication, assembled by Elizabeth L. Egenhoff.

Not only are the records of the building-materials industry the earliest documents on the use of California minerals, but they also provide an interesting picture of the growth and development of the state before the gold rush. Because the early building industry was chiefly operated by the Franciscan missionaries in their efforts to provide permanent, substantial physical structures for the churches and their attendant buildings, much of the early history of construction in California is the history of its 21 missions and the cities that grew about them.

The documents presented in Fabricas are descriptions and pictures by visitors and residents of early California. Some of the material has never been published before; some is selected from books and pamphlets that are now rare Californiana.

The history of construction of one mission, Santa Barbara, is told in detail in the words of the Franciscan Fathers, as recorded year by year, in the Spanish manuscript records on file in the Mission archives. An English translation is appended, illustrated by a plan of the mission and numerous photographs.

Among the early visitors to California who reported on buildings was Jean Francois Galaup de la Perouse, a French navigator who landed at Monterey in 1786. His description, selected from the journal of his travels, is given, both in French, as he wrote it, and in English translation. Other early travelers left both written and pictorial records: one, Alfred Robinson, a resident of the state in the 1830's, published a book about his sojourn in California, illustrated by his own drawings; another, G. M. Waseurtz, known as "Dr. Sandels," left a manuscript describing his journeys, together with pencil and watercolor sketches; William Rich Hutton, a mid-century California resident, left 95 pencil sketches and water-colors—27 are shown in Fabricas—depicting early California life. These and many others whose works are quoted or reproduced in Fabricas, told of the buildings as they saw them.

Some later travellers, coming after the gold rush and after many of the missions had fallen into disrepair, sketched them as they were: empty shells and ruined walls. Others, more imaginative, sketched them as they thought they had been. For example, Mrs. Oriana Day, who painted in the 1880's, did a series of oil

paintings of all 21 missions, reconstructing them on canvas as she conceived them to have been shortly after their foundation. These and other of her paintings are reproduced in Fabricas.

Altogether, the book has nearly 300 illustrations, and in its 190 pages, selections from the works of more than twenty lay and numerous churchmen are presented.

Fabricas, the second in the Division of Mines series on the development of the mineral industries in California; was preceded by "The Elephant as They Saw It," a collection of pictures and statements about early gold mining in the state. Both were issued as supplements to the California Journal of Mines and Geology—Fabricas supplements the April, 1952 issue. It is available as a separate, bound in paper, priced at $1.00, plus 3 per cent sales tax, and may be ordered from the State Division of Mines, Ferry Building, San Francisco 11, Calif.

**GEOLOGY:** by O. D. von Engeln and Kenneth E. Caster.

A new book on geology came out on July 1, 1952. Its title is "Geology" and its authors are O. D. von Engeln of Cornell University and Kenneth E. Caster of the University of Cincinnati.

This interesting volume with its many fine illustrations should be warmly welcomed by all students of geology, whether beginners or advanced. The book is divided into 7 parts as follows: Introduction to Geology; Natural History of Igneous Rocks; Structure, Process, Forms; Cenozoic Era; Mesozoic Era; Paleozoic Era; and Cryptozoic Era (each with its subdivisions).

A feature of the book which is to be commended is the one which marks by bold face type the explanation of technical terms when they appear for the first time. Another feature which appears consistently is the English translation of many technical terms whose origin is Greek or Latin. Still another feature appears in historic geology which is treated by going backward in time from the present period by period, to an ultimate arrival at the dimly known origin of the planet.

730 pages, 373 figures. Price $7.00.

Published by McGraw-Hill Book Co., Inc., 330 West 42nd St., New York 36, N. Y.

### Australian Bulletin

Western Australian Geological Survey, Perth, Western Australia, recently released Bulletin No. 103 which contains the following two reports:

*Geology of portions of the Mt. Margaret goldfield,* by R. A. Hobson and K. R. Miles *and garnetised gabbro from the Wulaminna district, Mt. Margaret goldfield,* by K. R. Miles.

The bulletin contains 150 pages, 3 plates and 2 figures.

### Albanese Issues List No. 56

John S. Albanese, P. O. Box 536, Newark 1, N. J., has issued a new mineral price list No. —56. It embraces fine mineral specimens, mostly from old collections. The minerals are listed alphabetically and come from many of the world's most famous localities. This 9-page list is free for the asking. Write for your copy TODAY!

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**REPORT OF THE COMMITTEE ON THE MEASUREMENT OF GEOLOGIC TIME, 1950-1951:** John Putnam Marble, Chairman.

The report contains a summary report of the committee; Annotated bibliography of articles related to the measurement of geologic time; Abstracts of papers delivered at the symposium on the measurement of geologic time; extracts from the preliminary report of the committee on the measurement of geologic time in India; and Natural variations in isotopic ratios of the chemical elements.

Issued by the National Research Council, 2101 Constitution Ave., Washington 25, D. C. —140 pages, price $1.00.

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### A TRIP TO HAWAII

*(Continued from page 353)*

Dr. Chrones made the first rock Lei ever made which consisted of different rocks and minerals from different Hawaiian islands. He gave it to me — put it around my neck on our departure from the Honolulu Airport, May 16, 1952.

I have quite a supply of the Hawaiian minerals so if anyone is interested he may call to see them.

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### HOBBIES AND FRIENDSHIPS

*(Continued from page 355)*

follow after righteousness, ye that seek the Lord; look unto the rock whence ye are hewn, and the hole of the pit whence ye are digged."

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### BOSCH COLLECTION GIVEN TO YALE

*(Continued from page 379)*

Meanwhile, that part of the public — and it is a large part — fascinated by the rocks and minerals, will eagerly await the time when the wealth of the Bosch collection will be ready for inspection on the part of the most scientific student as well as by the humblest rock hound of the nation.

# LA FLECHE CAVE OF CANADA

By RUTH H. WENTWORTH
135 Maine Avenue, Portland, Maine

Have you ever wished that you might go back into the past, to forget your every-day cares? If you have, and are near Ottawa, Ontario, go to La Fleche Cave, Wilsons Corners, Quebec. Drive through Hull, taking Highway 11, Chelsea Road, Wright Bridge, and Cantley. This is through farm country over a good dirt road; distance, 18 miles.

La Fleche Cave was discovered in 1865 by a hunter, Mr. J. Dubois. In 1923, it was opened to the public. It is now owned by Mr. Z. La Fleche, Hull, Quebec.

After parking your car, you turn to the right and climb a short hill, adjacent to which is a small deep lake, said to be in the crater of a volcano. On the left, the hill enclosing the cave is of granite schist coated with black limonite. It is said to be "burned" rock. Fragments of biotite mica schist protrude through the side of the hill, being in size from 2 or 3 inches to sizes up to 3 x 4 feet. The entrance to the cave is on the side of the hill and 20 or 30 feet above the level of the lake.

The cave has a depth of 95 feet, the bottom of which is on a level with the bottom of the outside lake. The average yearly temperature is 40 degrees. The cave is well lighted, and has solid plank steps, with railings. At the bottom is an unexplored chamber and a tiny pool of clear water.

Mr. Rene La Fleche, son of the owner, showed us the cave, telling us related legends. Of course, there were many fanciful figures such as owls, cats, monkeys, etc. There were beautiful stalactites of dripstone in the form of stone draperies and petrified falls. There was a huge hanging stone which emitted hollow sounds (echoes) when tapped with a wooden mallet. There was a 20-foot tunnel about 3 feet high which you crawled through over pure slippery calcite. The atmosphere was moist and cool.

Fragments of schist protruded here and there from the inside walls although not in such large pieces. Halfway to the top, high above us, there appeared to be an electric eel, golden brown in color and with two eyes, head and front of body showing. Near this was a bluish bass, head and part of fish showing. Another wonder was a giant frog, 5 feet long. It apparently had been dissected by some force through the middle of the head and back, bringing to view, its green skin and red organs. We then saw what was supposed to be a human mother holding her baby, the baby's skull being crushed.

After shivering appropriately at these sights, we saw still higher 2 pieces of so-called petrified wood, split and cut at an angle, one blue and tan, and the other tan. These were said to have been cut by human hands.

You will leave this cave wondering at the complexities of Mother Nature. You can imagine the belching volcanoes of long ago. You can see them die down. You can see lakes form and dry up. You can imagine glaciers remaining in this area for thousands of years. And perhaps, you may even see the first cave man and his club. You will have a beautiful flight into the past; which is worth something, these days.

And then you will blink your eyes and realize that the rock is not volcanic, that it is granitic, an intrusive rock bared only by erosion.

In the long distant geological past this granitic rock was present. Sedimentary limestone deposited. Great pressure and possible heat then acted upon the limestone, leaving cracks and producing fragments of schist throughout the area. Then came water running along the cracks, making them larger as it dissolved the limestone.

An underground, above water cave must have formed. Then for thousands of years, calcite dissolved by subsurface

water was deposited by precipitation in the form of dripstone. The result is the La Fleche Cave.

As is true of all caves, the fanciful figures are irregularities in the wall which have been coated with calcite. The so-called petrified wood was never wood but is probably large crystals of scapolite or pyroxene produced at the time of heat and pressure.

Granite schist, biotite schist, limonite, microcline feldspar with crusts of calcite, tiny veins of graphite, colorless quartz and biotite mica in small scattered flakes were observed. The first three kinds were on the side of the hill. The feldspar grouped with the other four minerals was found in an excavation at the foot of the hill.

Authority for geology — V. B. Meen, Director Royal Ontario Museum of Geology and Mineralogy, Toronto, Canada.

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